



# SERVICE MANUAL

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MODEL : M3

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**M3 C/AH**

**INTEGRATE AMPLIFIER**

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# SECTION 1

## SUMMARY

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# PRODUCT SAFETY SERVICING GUIDELINES FOR AUDIO PRODUCTS

**CAUTION :** DO NOT ATTEMPT TO MODIFY THIS PRODUCT IN ANY WAY, NEVER PERFORM CUSTOMIZED INSTALLATIONS WITHOUT MANUFACTURER'S APPROVAL. UNAUTHORIZED MODIFICATIONS WILL NOT ONLY VOID THE WARRANTY, BUT MAY LEAD TO YOUR BEING LIABLE FOR ANY RESULTING PROPERTY DAMAGE OR USER INJURY.

SERVICE WORK SHOULD BE PERFORMED ONLY AFTER YOU ARE THOROUGHLY FAMILIAR WITH ALL OF THE FOLLOWING SAFETY CHECKS AND SERVICING GUIDELINES. TO DO OTHERWISE, INCREASES THE RISK OF POTENTIAL HAZARDS AND INJURY TO THE USER.

WHILE SERVICING, USE AN ISOLATION TRANSFORMER FOR PROTECTION FROM A.C. LINESHOCK.

## SAFETY CHECKS

AFTER THE ORIGINAL SERVICE PROBLEM HAS BEEN CORRECTED. A CHECK SHOULD BE MADE OF THE FOLLOWING.

### SUBJECT : FIRE & SHOCK HAZARD

1. BE SURE THAT ALL COMPONENTS ARE POSITIONED IN SUCH A WAY AS TO AVOID POSSIBILITY OF ADJACENT COMPONENT SHORTS. THIS IS ESPECIALLY IMPORTANT ON THOSE MODULES WHICH ARE TRANSPORTED TO AND FROM THE REPAIR SHOP.

2. NEVER RELEASE A REPAIR UNLESS ALL PROTECTIVE DEVICES SUCH AS INSULATORS, BARRIERS, COVERS, SHIELDS, STRAIN RELIEFS, POWER SUPPLY CORDS, AND OTHER HARDWARE HAVE BEEN REINSTALLED PER ORIGINAL DESIGN. BE SURE THAT THE SAFETY PURPOSE OF THE POLARIZED LINE PLUG HAS NOT BEEN DEFEATED.

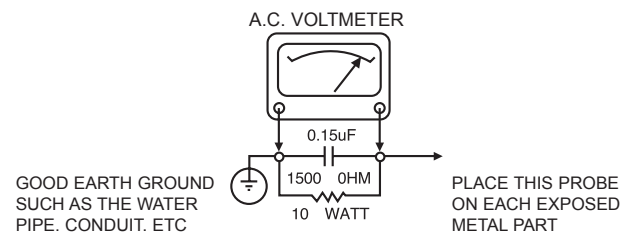
3. SOLDERING MUST BE INSPECTED TO DISCOVER POSSIBLE COLD SOLDER JOINTS, SOLDER SPLASHES OR SHARP SOLDER POINTS. BE CERTAIN TO REMOVE ALL LOOSE FOREIGN PARTICLES.

4. CHECK FOR PHYSICAL EVIDENCE OF DAMAGE OR DETERIORATION TO PARTS AND COMPONENTS. FOR FRAYED LEADS, DAMAGED INSULATION (INCLUDING A.C. CORD). AND REPLACE IF NECESSARY.

5. NO LEAD OR COMPONENT SHOULD TOUCH A RECEIVING TUBE OR A RESISTOR RATED AT 1 WATT OR MORE. LEAD TENSION AROUND PROTRUDING METAL SURFACES MUST BE AVOIDED.

6. ALL CRITICAL COMPONENTS SUCH AS FUSES, FLAMEPROOF RESISTORS, CAPACITORS, ETC. MUST BE REPLACED WITH EXACT FACTORY TYPES, DO NOT USE REPLACEMENT COMPONENTS OTHER THAN THOSE SPECIFIED OR MAKE UNRECOMMENDED CIRCUIT MODIFICATIONS.

7. AFTER RE-ASSEMBLY OF THE SET ALWAYS PERFORM AN A.C. LEAKAGE TEST ON ALL EXPOSED METALLIC PARTS OF THE CABINET, (THE CHANNEL SELECTOR KNOB, ANTENNA TERMINALS. HANDLE AND SCREWS) TO BE SURE THE SET IS SAFE TO OPERATE WITHOUT DANGER OF ELECTRICAL SHOCK. DO NOT USE A LINE ISOLATION TRANSFORMER DURING THIS TEST USE AN A.C. VOLTMETER, HAVING 5000 OHMS PER VOLT OR MORE SENSITIVITY, IN THE FOLLOWING MANNER; CONNECT A 1500 OHM 10 WATT RESISTOR, PARALLELED BY A .15 MFD. 150.V A.C TYPE CAPACITOR BETWEEN A KNOWN GOOD EARTH GROUND (WATER PIPE, CONDUIT, ETC.) AND THE EXPOSED METALLIC PARTS, ONE AT A TIME. MEASURE THE A.C. VOLTAGE ACROSS THE COMBINATION OF 1500 OHM RESISTOR AND .15 MFD CAPACITOR. REVERSE THE A.C. PLUG AND REPEAT A.C. VOLTAGE MEASUREMENTS FOR EACH EXPOSED METALLIC PART. VOLTAGE MEASURED MUST NOT EXCEED 75 VOLTS R.M.S. THIS CORRESPONDS TO 0.5 MILLIAMPS A.C. ANY VALUE EXCEEDING THIS LIMIT CONSTITUTES A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED IMMEDIATELY.



### SUBJECT: GRAPHIC SYMBOLS



THE LIGHTNING FLASH WITH A PROWHEAD SYMBOL. WITHIN AN EQUILATERAL TRIANGLE, IS INTENDED TO ALERT THE SERVICE PERSONNEL TO THE PRESENCE OF UNINSULATED "DANGEROUS VOLTAGE" THAT MAY BE OF SUFFICIENT MAGNITUDE TO CONSTITUTE A RISK OF ELECTRIC SHOCK.



THE EXCLAMATION POINT WITHIN AN EQUILATERAL TRIANGLE IS INTENDED TO ALERT THE SERVICE PERSONNEL TO THE PRESENCE OF IMPORTANT SAFETY INFORMATION IN SERVICE LITERATURE.

# SERVICING PRECAUTIONS

**CAUTION:** Before servicing the Stereo amplifier covered by this service data and its supplements and addends, read and follow the **SAFETY PRECAUTIONS**. NOTE: if unforeseen circumstances create conflict between the following servicing precautions and any of the safety precautions in this publication, always follow the safety precautions.

Remember Safety First:

## General Servicing Precautions

1. Always unplug the Stereo amplifier AC power cord from the AC power source before:

- (1) Removing or reinstalling any component, circuit board, module, or any other assembly.
- (2) Disconnecting or reconnecting any internal electrical plug or other electrical connection.
- (3) Connecting a test substitute in parallel with an electrolytic capacitor.

Caution: A wrong part substitute or incorrect polarity installation of electrolytic capacitors may result in an explosion hazard.

2. Do not spray chemicals on or near this Stereo amplifier or any of its assemblies.
3. Unless specified otherwise in this service data, clean electrical contacts by applying an appropriate contact cleaning solution to the contacts with a pipe cleaner, cottontipped swab, or comparable soft applicator. Unless specified otherwise in this service data, lubrication of contacts is not required.
4. Do not defeat any plug/socket B+ voltage interlocks with which instruments covered by this service manual might be equipped.
5. Do not apply AC power to this Stereo amplifier and/or any of its electrical assemblies unless all solid-state device heat sinks are correctly installed.
6. Always connect test instrument ground lead to the appropriate ground before connecting the test instrument positive lead. Always remove the test instrument ground lead last.

## Insulation Checking Procedure

Disconnect the attachment plug from the AC outlet and turn the power on. Connect an insulation resistance meter (500V) to the blades of the attachment plug. The insulation resistance between each blade of the attachment plug and accessible conductive parts (Note 1) should be more than 1 M-ohm. Note 1: Accessible Conductive Parts including Metal panels, Input terminals, Earphone jacks, etc.

## Electrostatically Sensitive (ES) Devices

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field effect transistors and semiconductor chip components.

The following techniques should be used to help reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed for potential shock reason prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an antistatic solder removal device. Some solder removal devices not classified a "anti-static" can generate electrical charges sufficient to damage ES devices.
5. Do not use freonpropelled chemicals. These can generate electrical charge sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil, or comparable conductive material).
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

Caution: Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

8. Minimize bodily motions when handling unpackaged replacement ES devices. (Normally harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device.)

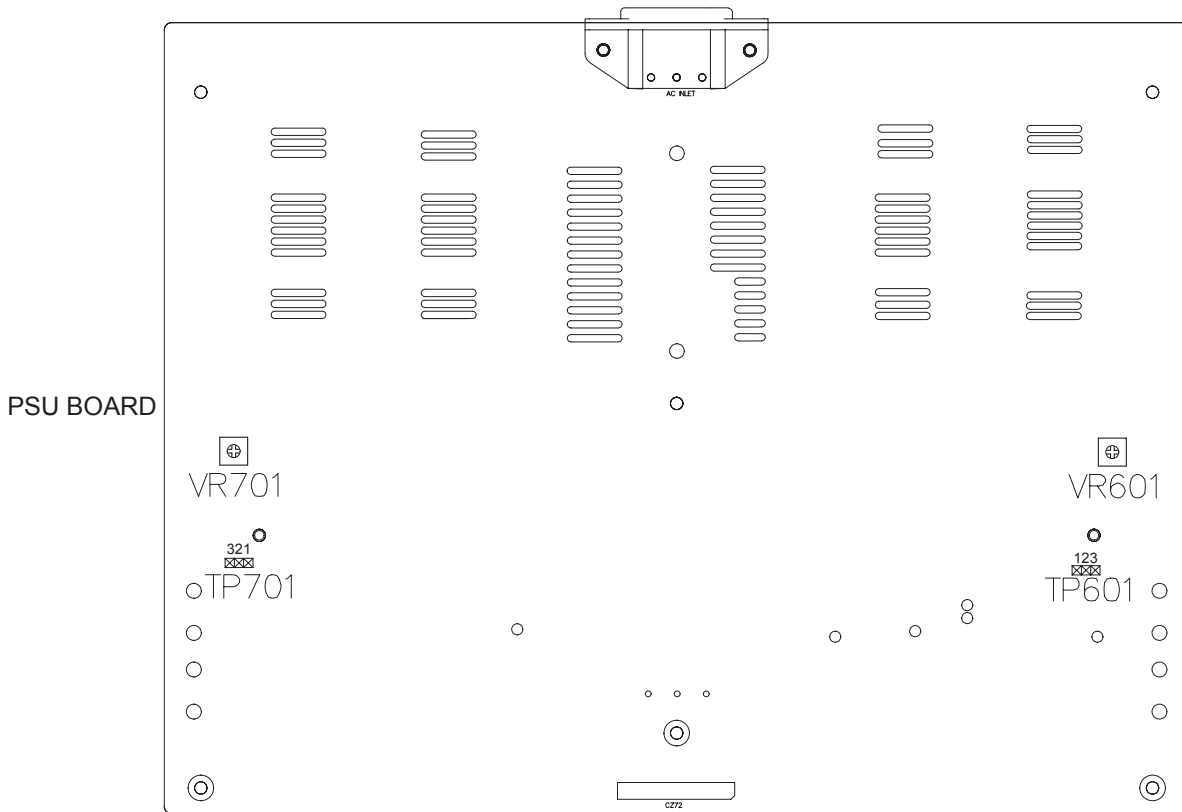
# ALIGNMENT PROCEDURE

## A. POWER DRIVEN VOLTAGE(PSU BOARD)

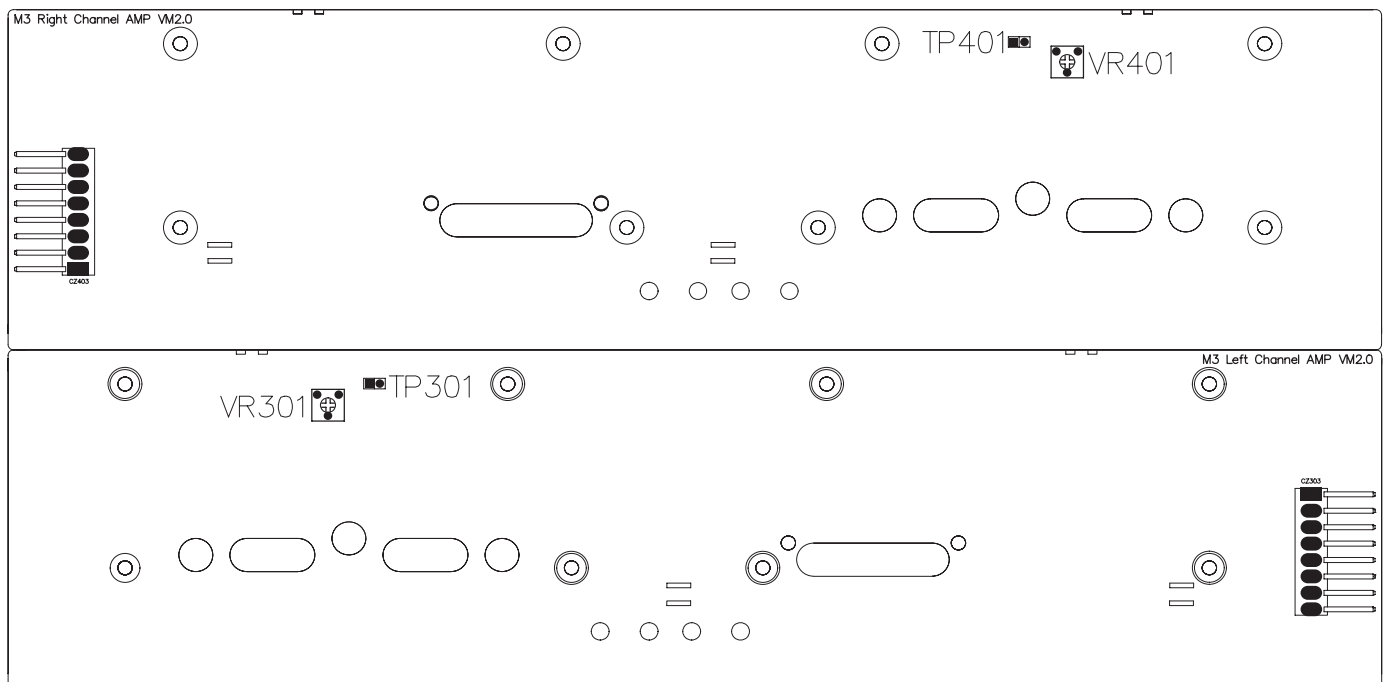
Connect a DC Millivoltmeter to TP601/TP701 1 and 2 pin, then adjust VR601/VR701(6.8kohms) for  $0V \pm 0.1V$ .

## B. IDLING CURRENT(AMP BOARD)

- 1.Connect a DC Millivoltmeter between TP301 2 pins, then adjust VR301 (200ohms) for 7-8mV reading on meter.
- 2.Connect a DC Millivoltmeter between TP401 2 pins, then adjust VR401 (200ohms) for 7-8mV reading on meter.
3. Watch for 10minutes, to make sure it is around 7mV

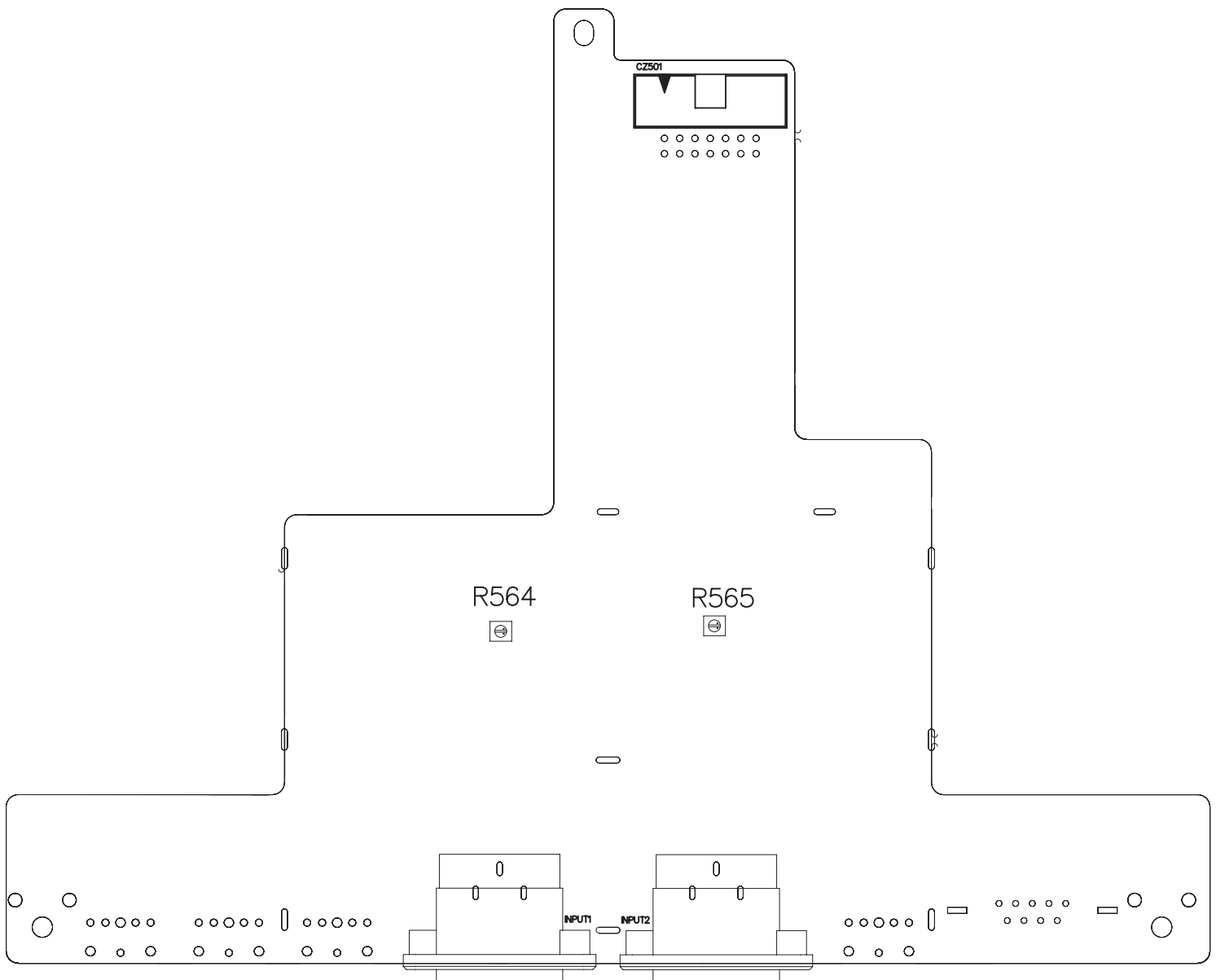


## AMP BOARD(L/R)



### C. BALANCE INPUTS CMRR

1. Volum set 0dB, Input 2V/10KHZ common mode sinwave signal at L channel Balance input, Connect a AC Millivoltmeter to preout1L then adjust R565 for lowest output level.
2. Volum set 0dB, Input 2V/10KHZ common mode sinwave signal at R channel Balance input, Connect a AC Millivoltmeter to preout1R then adjust R564 for lowest output level.



# SPECIFICATIONS

## NAD M3 INTEGRATE AMPLIFIER

Note: Specifications are measured in accordance with EIA Standard RS-490 (IHF A-202) for amplifiers

### Power Amplifier Section

|                                                                                                                                               |                                              |                         |
|-----------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|-------------------------|
| <b>Continuous output power into 4/8 ohms</b><br>(Minimum RMS power per channel, both channels driven, With no more than the rated distortion) |                                              | 180W (17dBw)            |
| <b>Rated distortion (THD)(20Hz –20kHz)</b>                                                                                                    |                                              | ≤0.004%                 |
| <b>Channel Separation</b><br>(MAIN IN, 60W Out at 8Ω,1kΩ shorted, 1kHz)                                                                       |                                              | ≥100dB                  |
| <b>Clipping power, 1kHz</b><br>(Maximum continuous power per channel)                                                                         |                                              | 220W                    |
| <b>Dynamic Headroom at 8 ohms</b>                                                                                                             |                                              | 4.2dB                   |
| <b>Dynamic power</b><br>(Maximum short-term power per channel )                                                                               | <b>8ohms</b><br><b>4ohms</b><br><b>2ohms</b> | ≥280W<br>≥480W<br>≥785W |
| <b>Damping factor</b>                                                                                                                         |                                              | ≥150                    |
| <b>Signal to noise ratio(refer 1W A-weighted)</b>                                                                                             |                                              | ≥100dB                  |
| <b>Slew rate</b>                                                                                                                              |                                              | ≥20V/μsec               |
| <b>T.H.D and SMPTE I.M.</b><br>(Distortion from 250mW to rated output)                                                                        |                                              | ≤0.01%                  |
| <b>IHF I.M. (CCIF IM) and T.I.M distortion</b><br>(From 250mW to rated output))                                                               |                                              | ≤0.005%                 |
| <b>Input impedance</b>                                                                                                                        |                                              | 20kΩ/680pF              |
| <b>Input sensitivity</b> ( For rate power into 8ohms)                                                                                         |                                              | 1.38V                   |
| <b>Power amp gain</b>                                                                                                                         |                                              | 29dB                    |

### Preamplifier Section

|                                           |               |
|-------------------------------------------|---------------|
| <b>Input Impedance</b> single-ended input | 150kΩ/500pF   |
| balanced input                            | 120kΩ //100pF |

|                                                                     |                  |
|---------------------------------------------------------------------|------------------|
| <b>Signal-to-Noise ratio</b><br>(A-weighted, line In, Pre-Out)      | 110dB ref 500mV  |
| <b>Rated distortion (THD)</b> (20Hz –21kHz)                         | ≤0.005%          |
| <b>Channel Separation</b><br>(1kHz 2V Line/balanced IN, 2V Pre-Out) | ≥110dB           |
| <b>Input Sensitivity</b>                                            | 320mV for 2V out |
| <b>Input Overload</b> <b>Line input</b><br><b>Balanced input</b>    | ≥10V<br>≥9 V     |
| <b>Frequency response</b> (5Hz-70KHz)                               | < +/-0.3dB       |
| <b>THD (SUB OUT)</b><br>(2V CD in, 2V SUB out; 50Hz, 80kHz LPF)     | ≤0.01%           |
| <b>THD (ZONE 2 OUT)</b><br>(2V CD IN, 1kHz, 80kHz LPF)              | ≤0.01%           |
| <b>Outputs</b>                                                      |                  |
| <b>Preamp output impedance</b>                                      | 100 Ω            |
| <b>Zone2 output impedance</b>                                       | 600 Ω            |
| <b>Controls</b>                                                     |                  |
| <b>Treble</b>                                                       | ±5dB at 10kHz    |
| <b>Bass</b>                                                         | ±5dB at 100Hz    |

## Pre-in ,Power AMP out,input 2V

|                                                                                    |                   |
|------------------------------------------------------------------------------------|-------------------|
| <b>Signal-to-Noise ratio, A-weighted</b><br>(500mV CD in, SPK out, 8Ω, A weighted) | 107dB ref 1 W out |
| <b>Rated distortion (THD)</b> (20Hz –20kHz)                                        | ≤0.008%           |
| <b>Input sensitivity</b><br>(CD in, SPK out, at rated power, volume max.)          | 450mV             |
| <b>Channel Separation</b><br>(CD in, 20W out at 8Ω, 1kΩ shorted, 1kHz)             | ≥100dB            |
| <b>Frequency response</b>                                                          | +/-0.3dB          |

## PHYSICAL SPECIFICATIONS

|                       |                               |
|-----------------------|-------------------------------|
| Dimensions(W x H x D) |                               |
| Net                   | 17.2x5.3x15.2”(435x135x386mm) |
| Gross                 | 17.2x5.8x17.2”(435x147x435mm) |
| Net Weight            | 51.8lbs(23.5kg)               |
| Shipping Weight       | 68.3lbs(31.0kg)               |

# SECTION 2

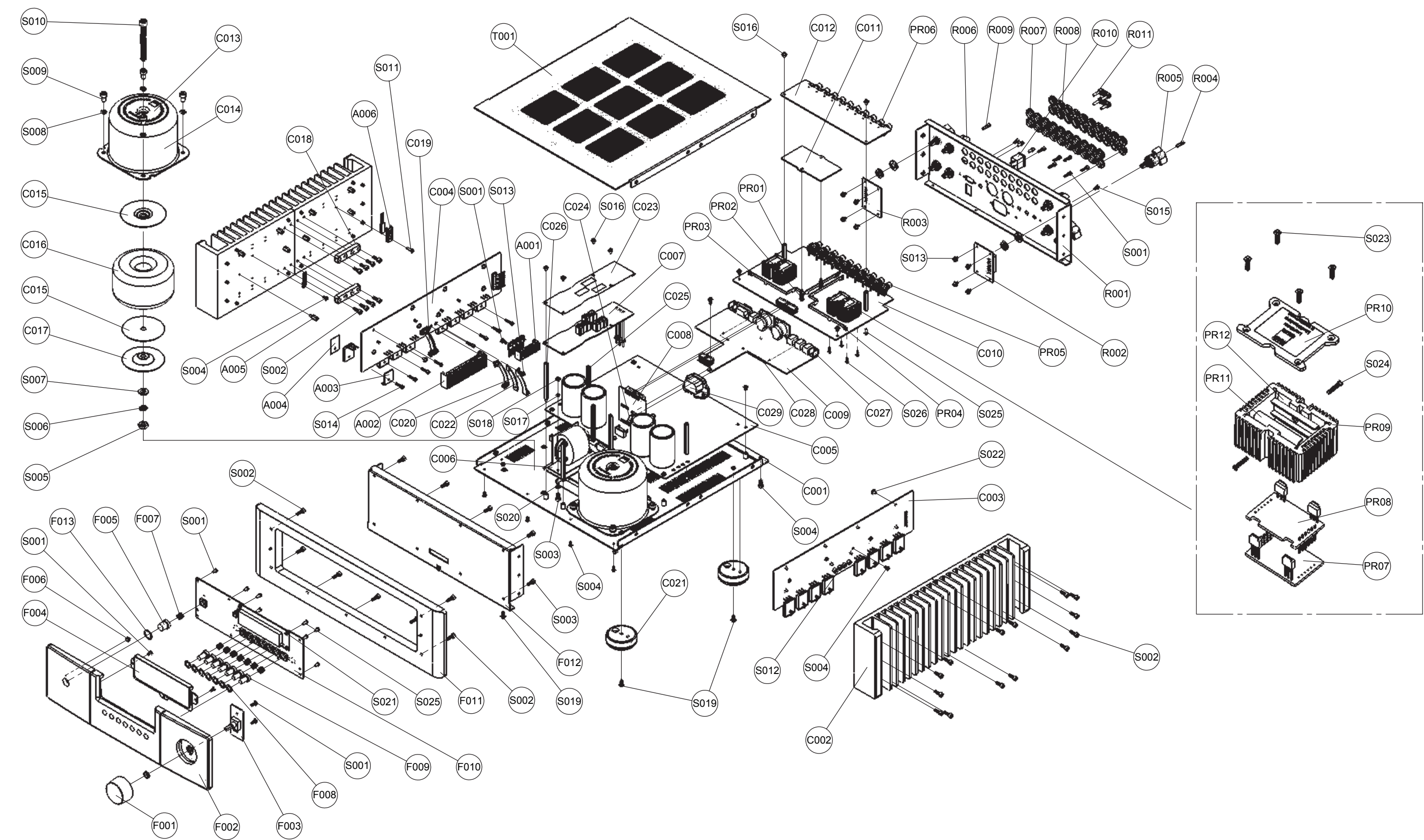
## CABINET & MAIN CHASSIS

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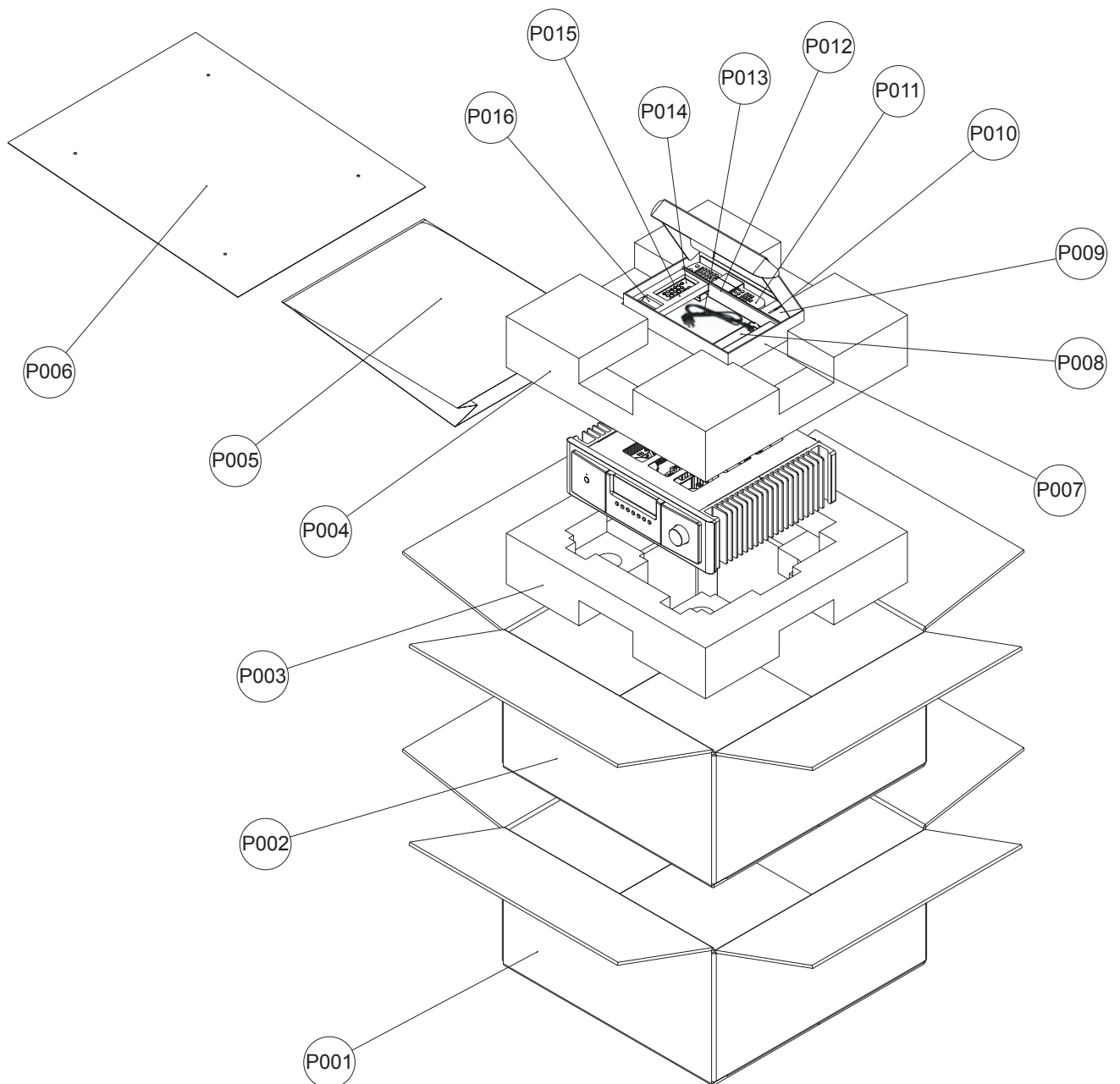
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# EXPLODED VIEWS

## 1. Cabinet and main frame section



## 2. Packing accessory section



### 3. Exploded view parts list

| REF.NO | PART NO.    | DESCRIPTION               | Qty. | REF.NO | PART NO.    | DESCRIPTION               | Qty. |
|--------|-------------|---------------------------|------|--------|-------------|---------------------------|------|
| C001   | 67-048002-2 | Chassis                   | 1    | R001   | 67-048004-1 | Rear Panel (C)            | 1    |
| C002   | 70-048001-0 | Heatsink                  | 4    |        | 67-048014-2 | Rear Panel (AH)           | 1    |
| C003   | 01-50306-02 | RAMP Board Assy           | 1    |        | 67-048024-0 | Rear Panel (CCC)          | 1    |
| C004   | 01-50306-01 | LAMP Board Assy           | 1    | R002   | 01-50308-02 | SPK Board (R)             | 1    |
| C005   | 01-50305-00 | Power Board Assy          | 1    | R003   | 01-50308-01 | SPK Board (L)             | 1    |
| C006   | 01-50307-02 | StandbyBoard(Buttom) Assy | 1    | R004   | 77-048001-0 | Bindingpost Plug Red(C)   | 4    |
| C007   | 01-50307-21 | StandbyBoard(Top) Assy    | 1    | R005   | 17-03001-03 | HS Bindingpost Red Assy   | 4    |
| C008   | 01-50303-00 | Connect Board Assy        | 1    | R006   | 17-03001-04 | HS Bindingpost white Assy | 4    |
| C009   | 01-50301-00 | Balance Board Assy        | 1    | R007   | 77-048010-0 | Double step washer Red    | 10   |
| C010   | 01-50309-00 | PREM Board Assy           | 1    |        | 77-048011-0 | Double step washer White  | 10   |
| C011   | 01-50312-00 | Tone Board Assy           | 1    | R008   | 69-048016-0 | Counternut                | 20   |
| C012   | 01-50311-00 | L Input Board Assy        | 1    | R009   | 77-048002-0 | Bindingpost Plug White(C) | 4    |
| C013   | 94-048001-2 | Transformer label         | 2    | R010   | 11-01101-03 | Power Switch              | 1    |
| C014   | 68-048002-0 | Shielding Box             | 2    | R011   | 30-60480-00 | RCA Shorting Plug         | 2    |
| C015   | 18-53231-01 | Transformer rubber pad    | 4    |        |             |                           |      |
| C016   |             | Transformer               | 2    | A01    | 70-048005-0 | Small Heatsink B          | 2    |
| C017   | 66-001008-0 | Metal Disc                | 2    | A02    | 70-048004-0 | Small Heatsink            | 2    |
| C018   | 68-048001-1 | HS Fixl Bar               | 4    | A03    | 66-005009-0 | Tr. Clamping              | 16   |
| C019   | 69-048010-1 | Bus Bar A                 | 4    | A04    | 78-005005-0 | Insulated Cashion         | 16   |
| C020   | 69-048011-1 | Bus Bar B                 | 4    | A05    | 69-048024-0 | Copper Spacer-Screw       | 16   |
| C021   | 83-048010-0 | Foot Assy                 | 4    | A06    | 66-018005-0 | Tem. SW. Clamper          | 2    |
| C022   | 75-048022-0 | Bus Bar Washer            | 4    |        |             |                           |      |
| C023   | 76-048012-0 | PC Cover                  | 1    | PR01   | 69-048032-0 | Copper Spacer             | 2    |
| C024   | 85-008001-1 | Spacer Support            | 1    | PR02   | 85-048001-0 | Pcb Spacer                | 2    |
| C025   | 69-048013-0 | Copper Spacer             | 2    | PR03   | 69-048027-0 | PRE-BUSBAR L              | 1    |
| C026   | 69-048031-0 | Copper Spacer-Screw       | 4    | PR04   | 69-048028-0 | PRE-BUSBAR R              | 1    |
| C027   | 66-011011-0 | Connectible Bracket       | 2    | PR05   | 17-01001-16 | HS RCA Red Assy           | 10   |
| C028   | 66-048004-0 | Blance pcb Shielding      | 1    | PR06   | 17-01001-15 | HS RCA White Assy         | 10   |
| C029   | 17-07102-00 | AC Inlet                  | 1    | PR07   | 16-53013-00 | Pre. Module pcb Down      | 2    |
|        |             |                           |      | PR08   |             | Pre. Module pcb Up        | 2    |
| F001   | 71-048010-0 | Vol. Knob Assy            | 1    | PR09   | 70-048002-0 | Module Base               | 2    |
| F002   | 70-048011-0 | M3 Fascia 2               | 1    | PR10   | 70-048003-0 | Module Cover              | 2    |
| F003   | 01-50302-00 | Encoder Board Assy        | 1    | PR11   | 66-048001-0 | Tr. Bracket               | 4    |
| F004   | 76-048010-0 | Window lens               | 1    | PR12   | 78-048004-0 | Insulated Cashion         | 8    |
| F005   | 70-048013-0 | Power Button              | 1    |        |             |                           |      |
| F006   | 76-008001-1 | LED Lens                  | 1    | S001   | 61-023208-0 | Screws, BTB3×8            | 35   |
| F007   | 92-048001-0 | Spring for Button         | 8    | S002   | 61-224512-1 | Hex Screws 4×12           | 51   |
| F008   | 87-048002-0 | Input Button Pad          | 7    | S003   | 61-224508-1 | Hex Screws 4×8            | 10   |
| F009   | 70-048012-1 | Input Button              | 7    | S004   | 61-023206-0 | Screws, BTB3×6            | 40   |
| F010   | 01-50304-00 | FPP Board Assy            | 1    | S005   | 62-010802-0 | Nut M8                    | 2    |
| F011   | 70-048010-1 | M3 Fascia 1               | 1    | S006   | 63-020820-1 | Spring Washers φ8         | 2    |
| F012   | 67-048003-1 | Subfascia                 | 1    | S007   | 63-010816-0 | Washers φ8                | 2    |
| F013   | 87-048003-0 | Power Button Pad          | 1    | S008   | 63-020616-0 | Spring Washers φ6         | 8    |
|        |             |                           |      | S009   | 61-226510-0 | Hex Screws 6×10           | 8    |
| T001   | 67-048001-0 | Top Cover                 | 1    | S010   | 64-208070-0 | Bolts M8×70               | 2    |
|        |             |                           |      |        |             |                           |      |

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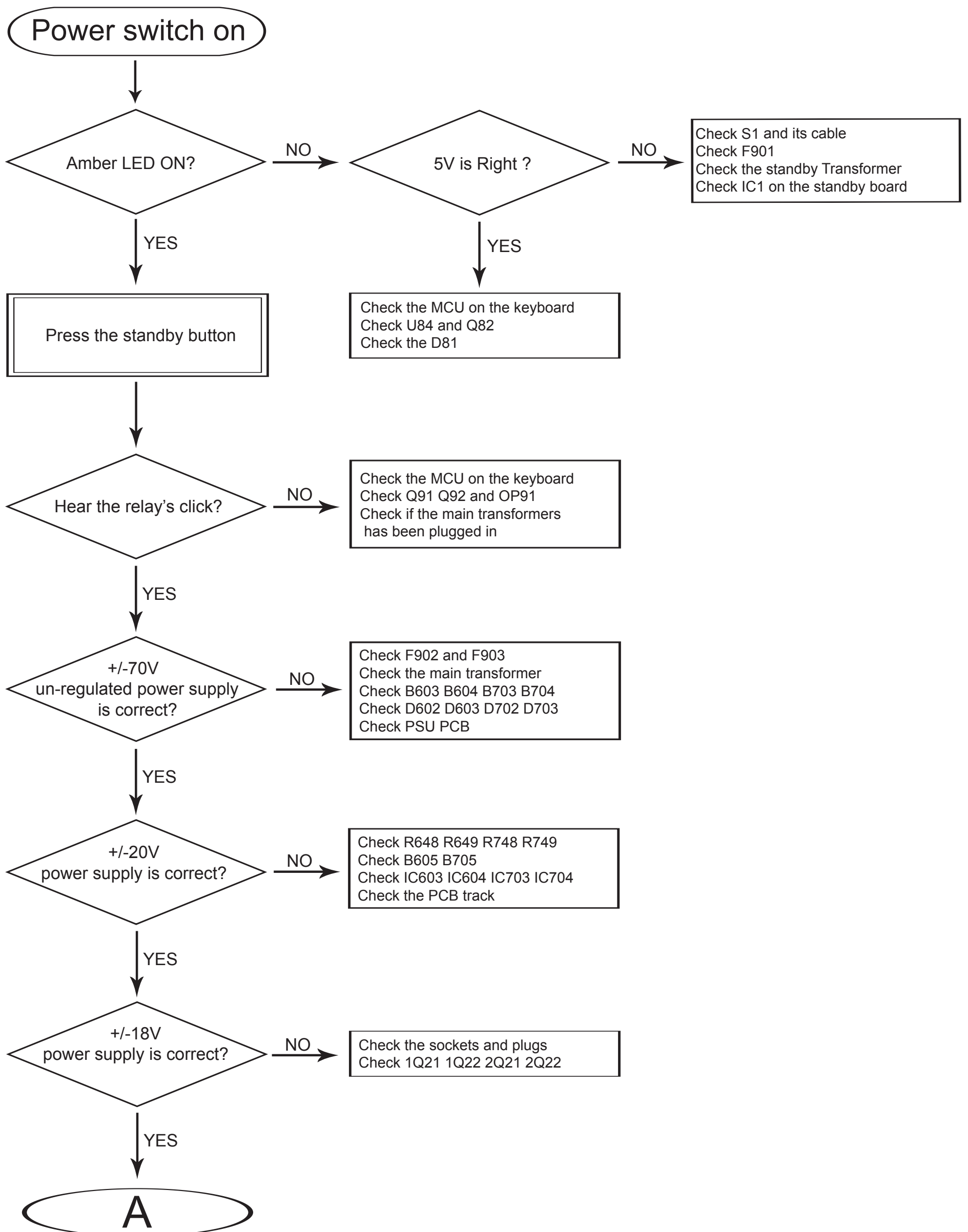
## SECTION 3

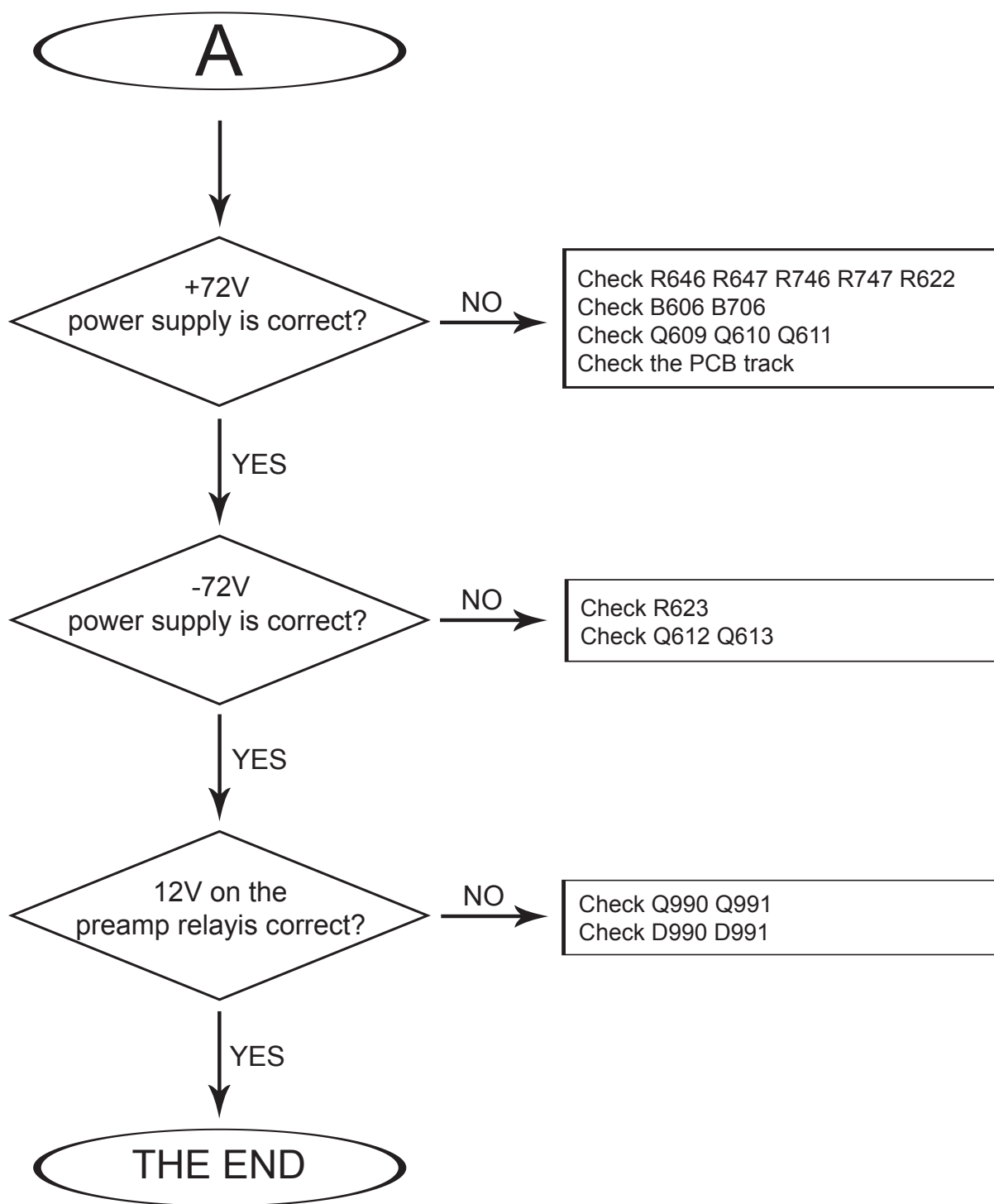
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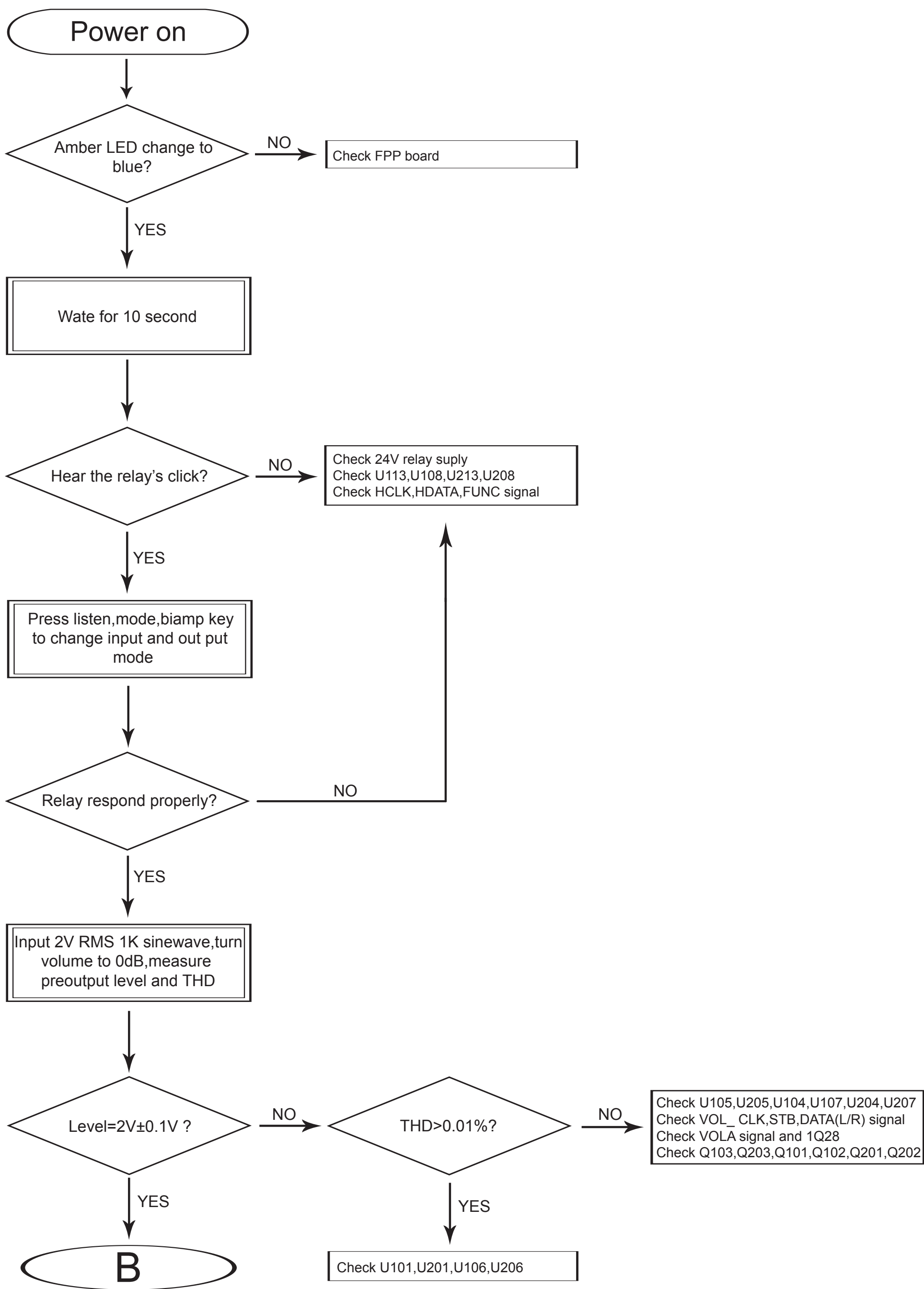
# ELECTRICAL TROUBLESHOOTING GUIDE

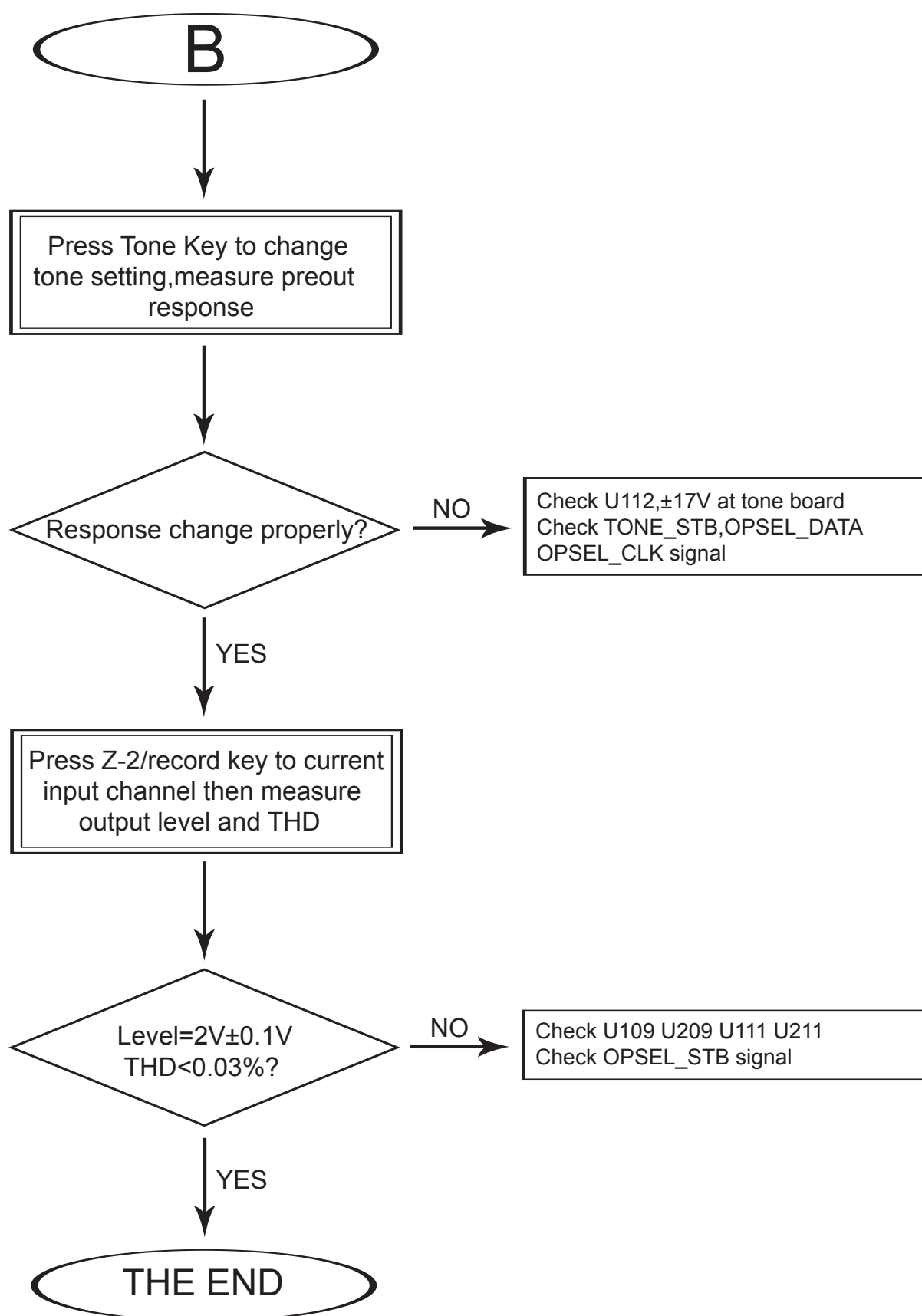
## 1.Power Check Flow





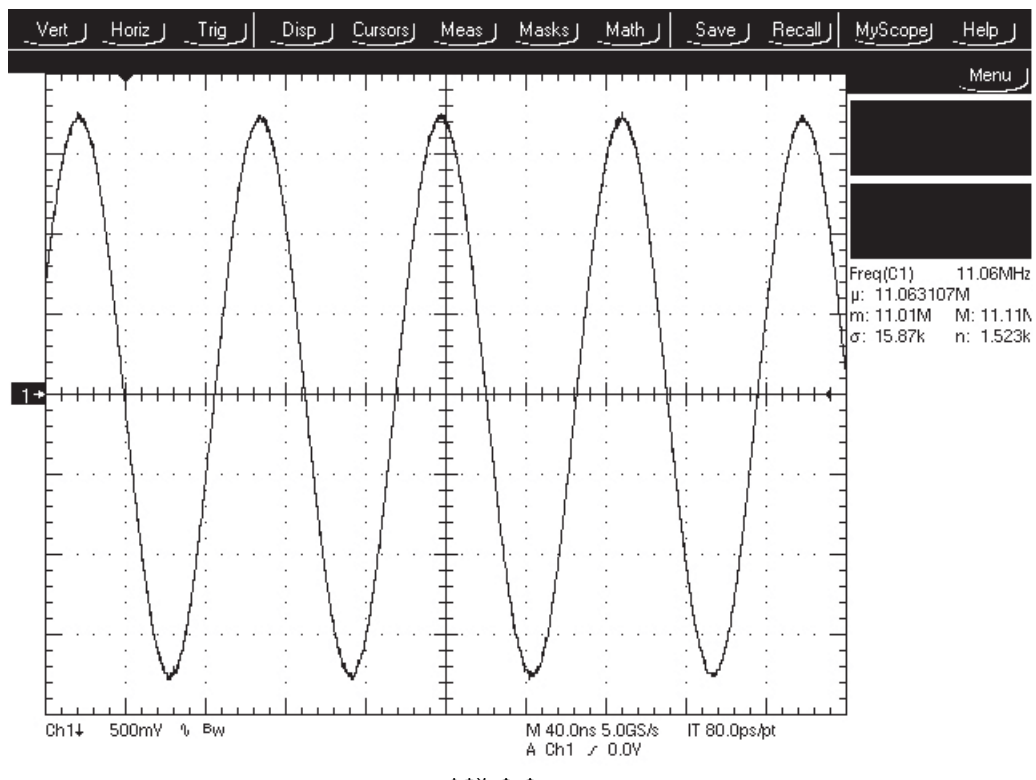
## 2.Preamp operation flow



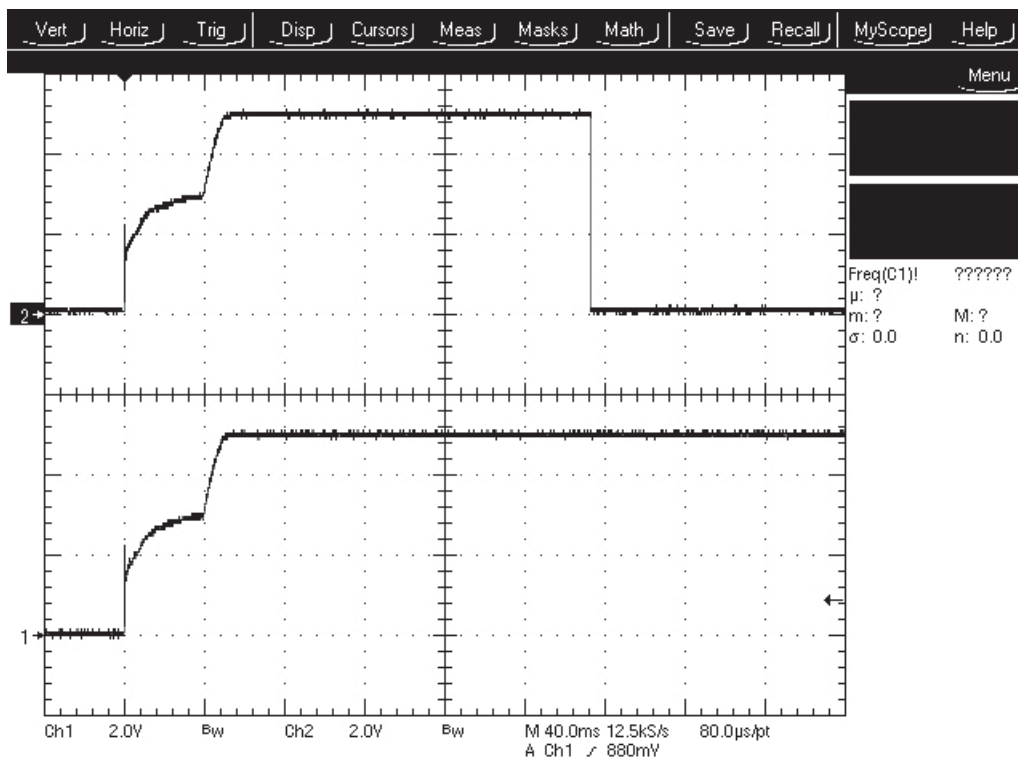


# DETAILS AND WAVEFORMS ON SYSTEM TEST AND DEBUGGING

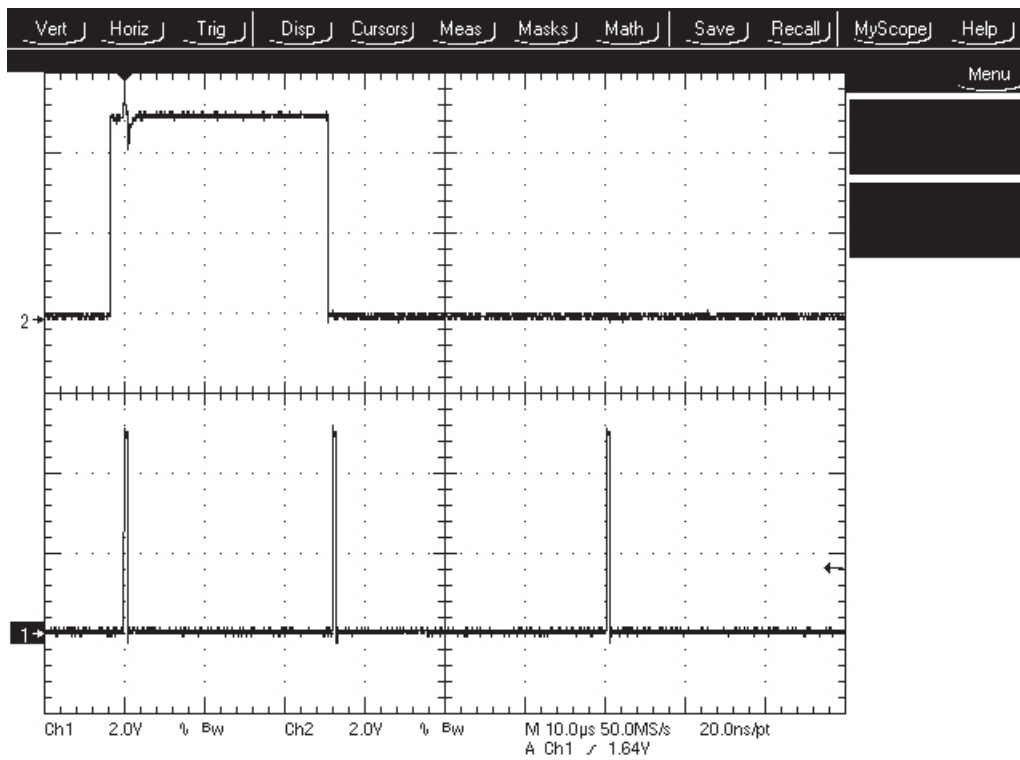
## 1. SYSTEM 11MHz CLOCK



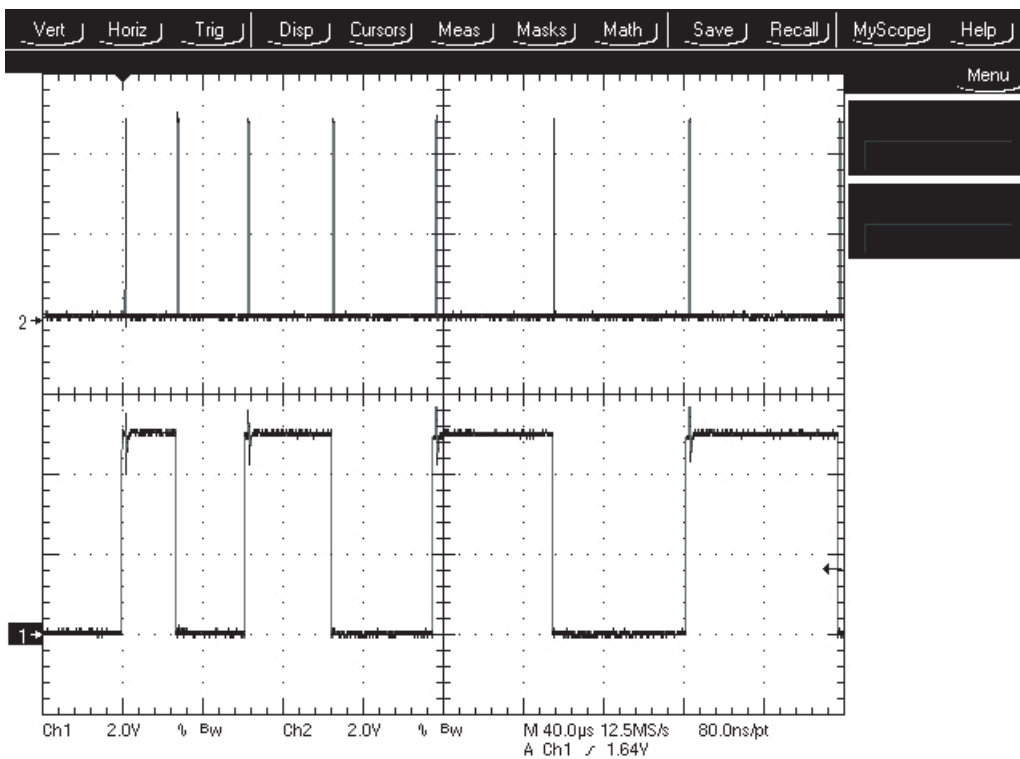
## 2. AT89C51 reset is high active.



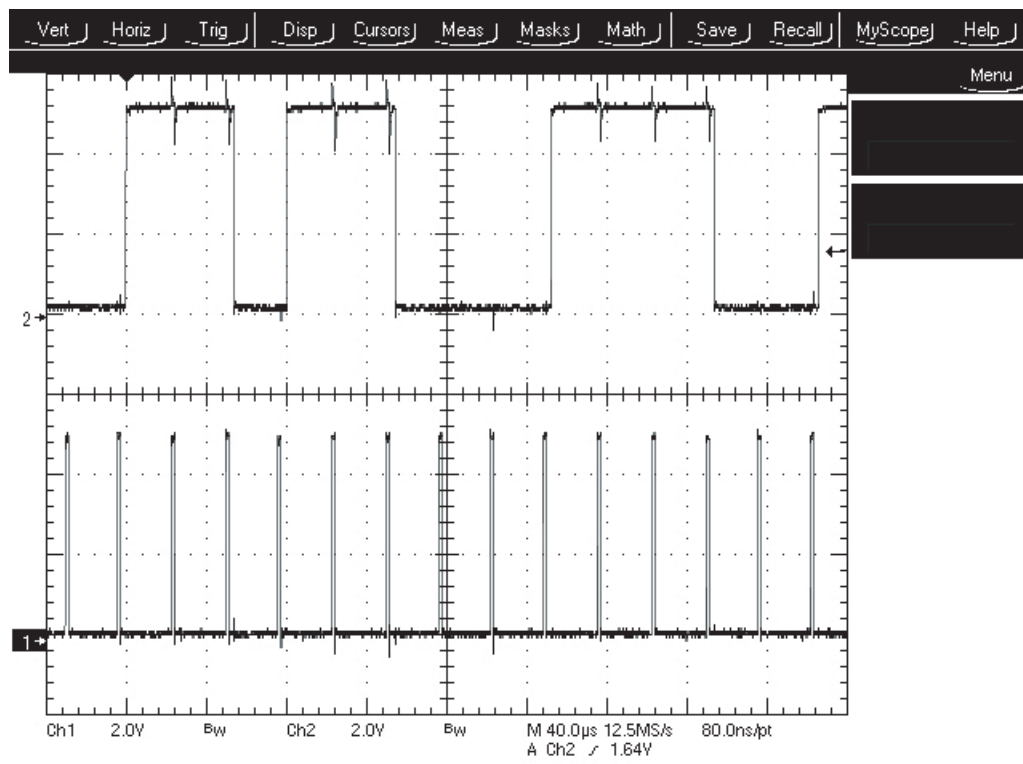
### 3.volume control DATA and CLOCK



### 4.REC(ZONE) select DATA and CLOCK

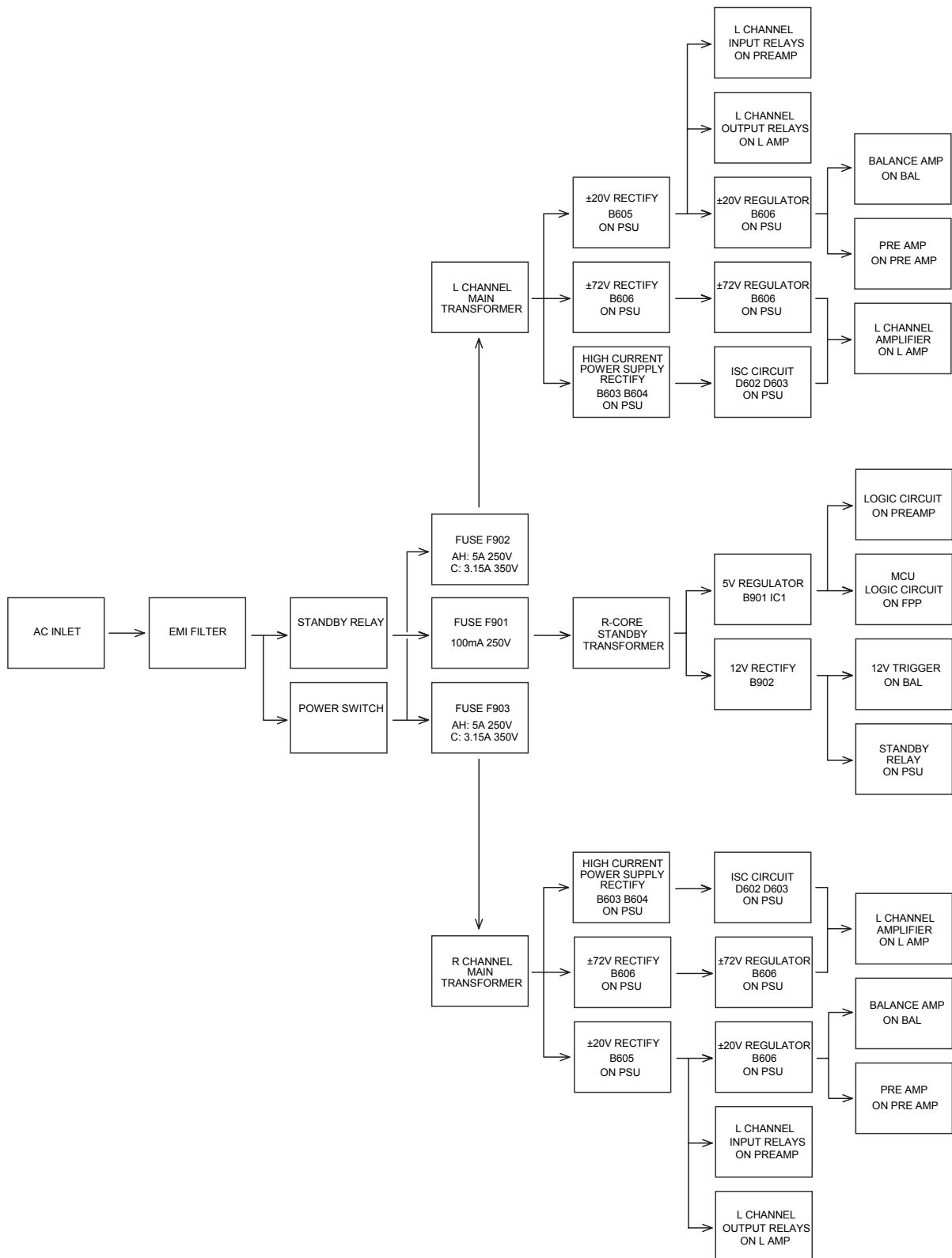


## 5. Input select DATA and CLOCK

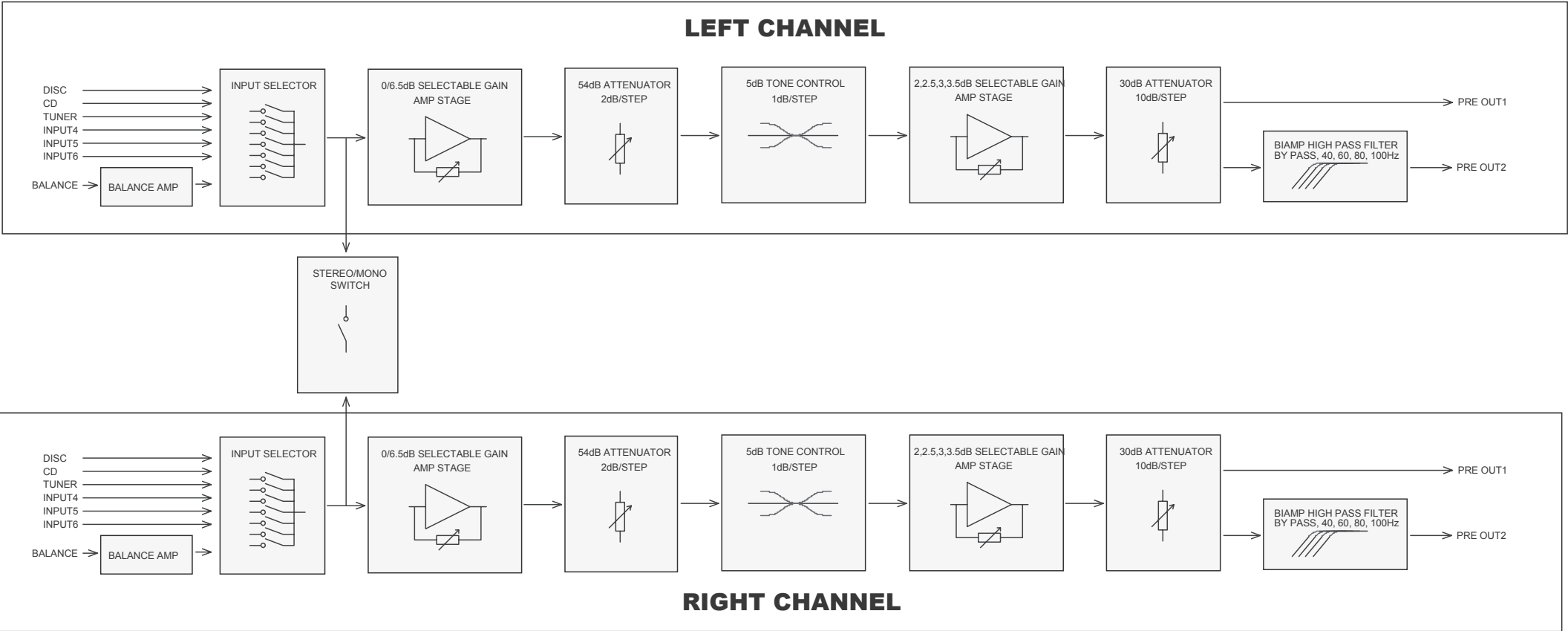


# BLOCK DIAGRAMS

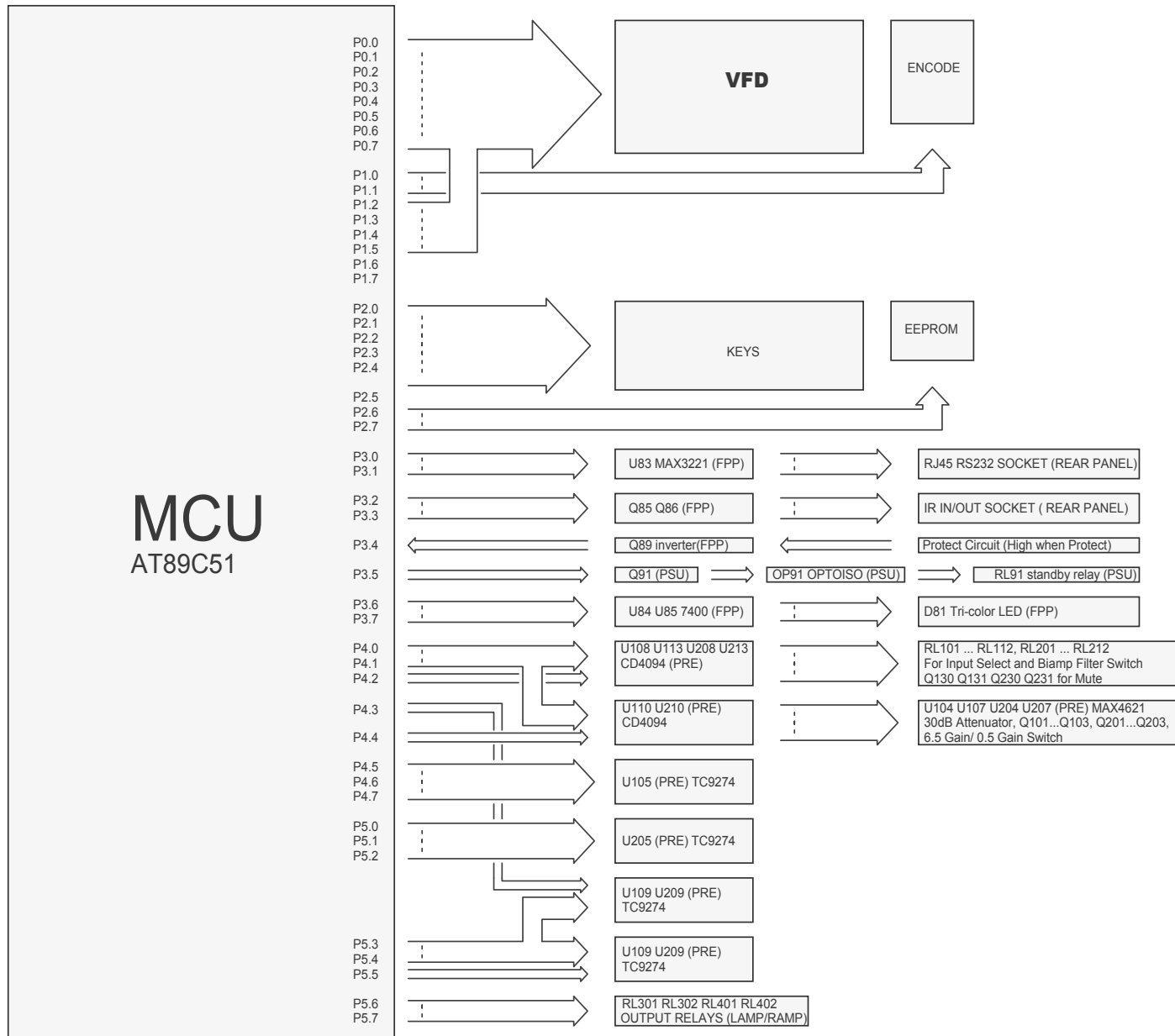
## 1. POWER DISTRIBUTE DIAGRAM



## 2. PREAMP SIGNAL PATH

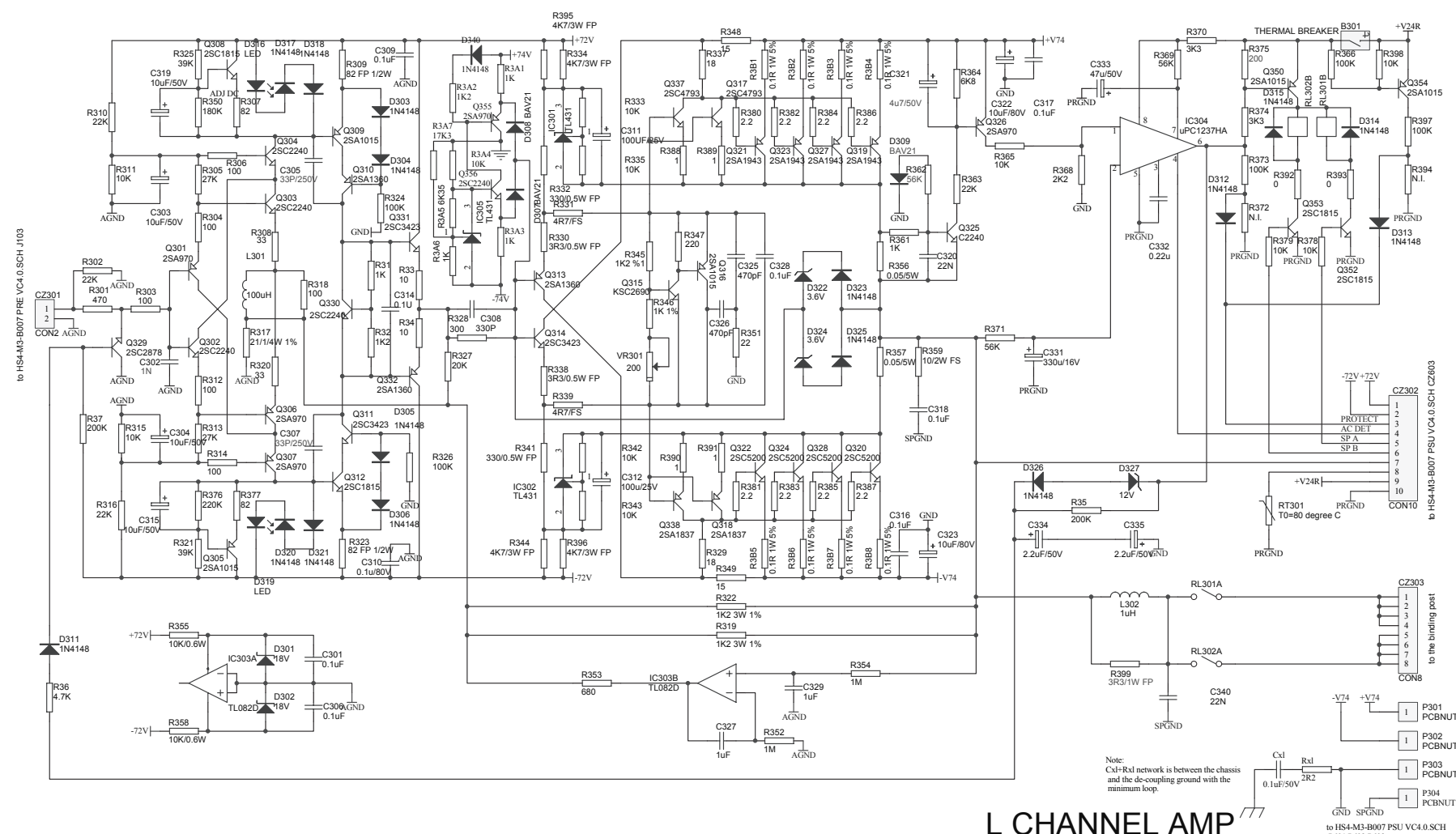


### 3. SYSTEM CONTROL PATH

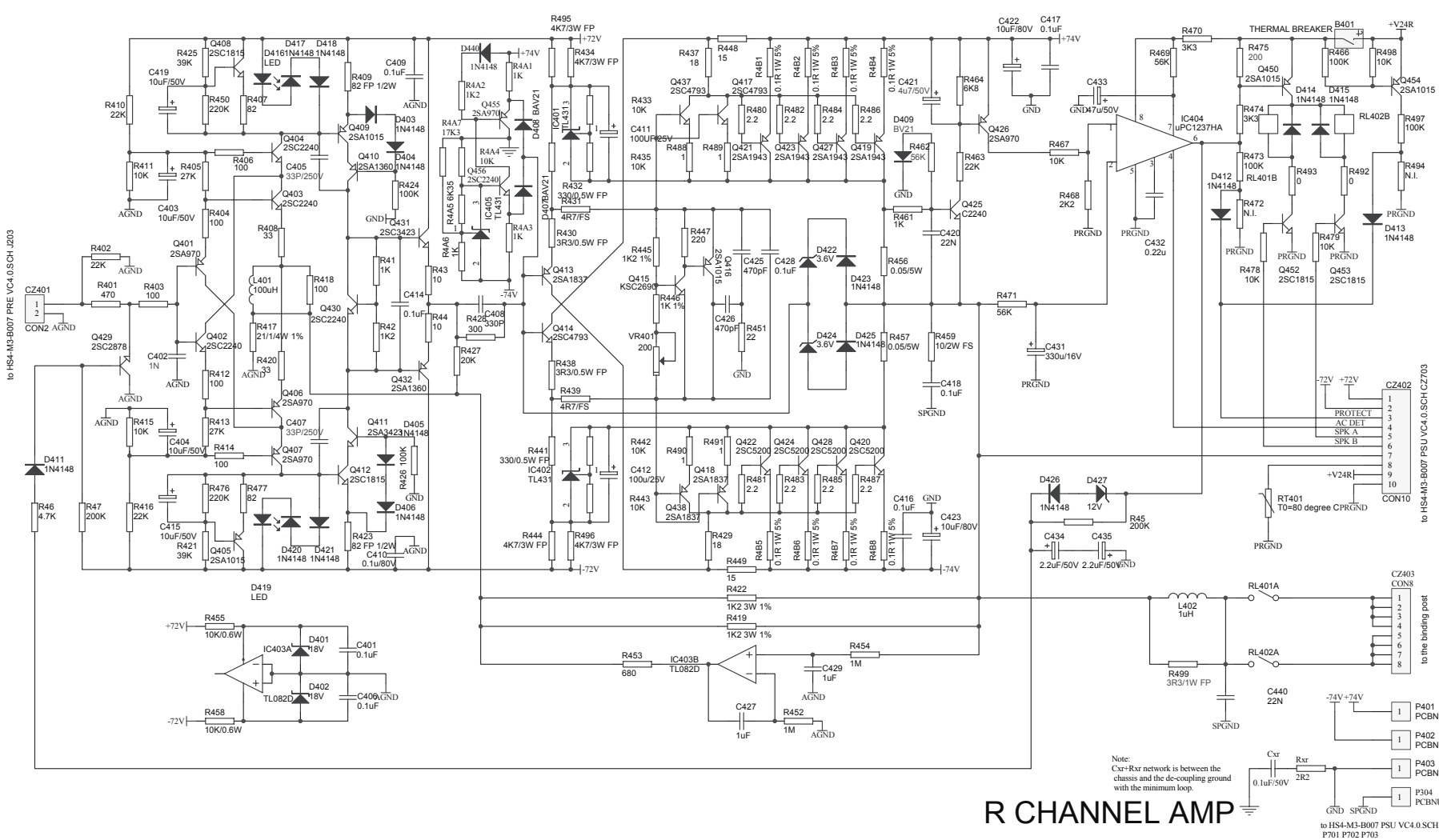


## CIRCUIT DIAGRAMS

## 1.POWER AMPLIFIER BOARD

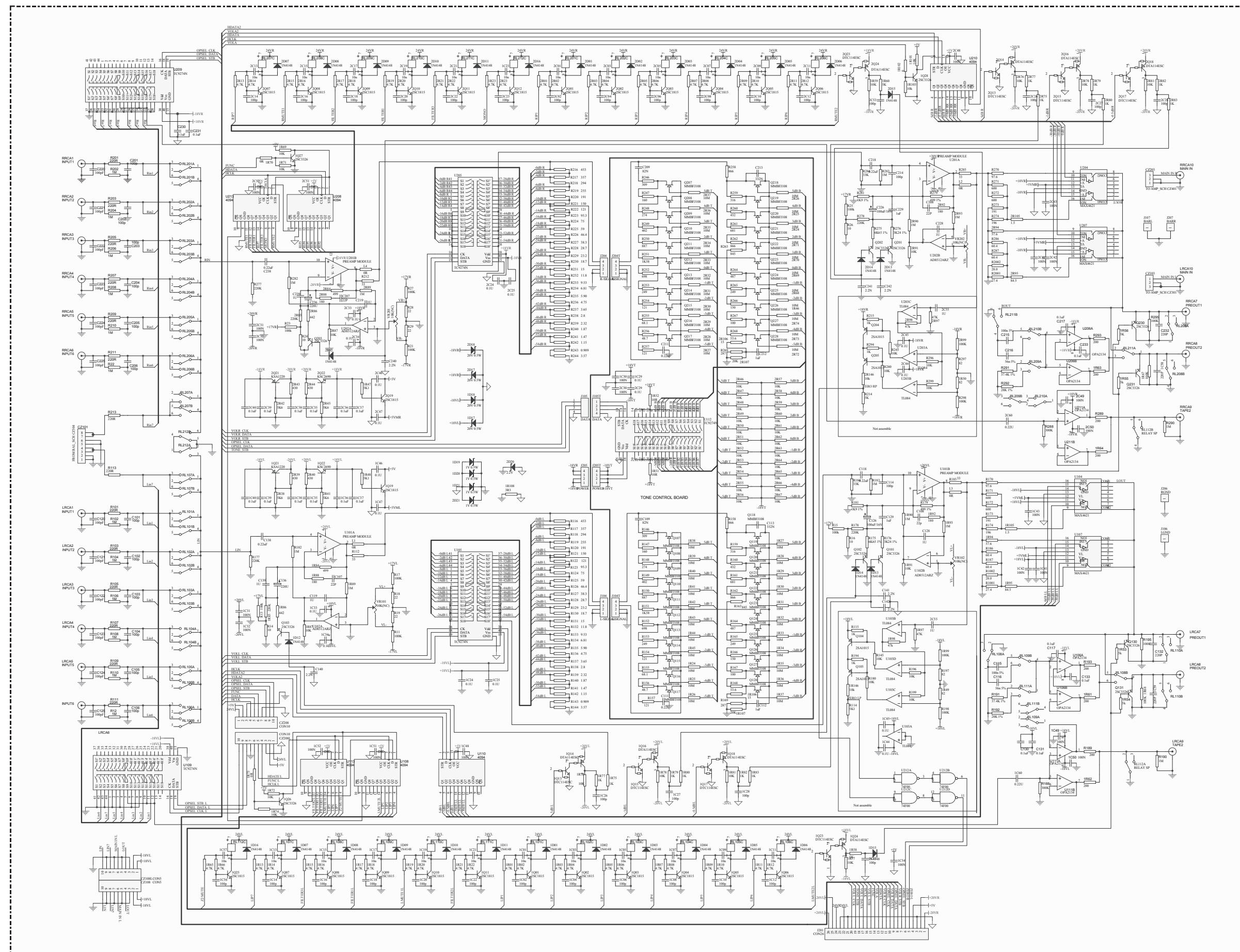


## L CHANNEL AMP



## R CHANNEL AMP

## 2. PREAMP BOARD



The schematic diagram illustrates the power supply section and the speaker connector boards for the HS4-M3-B007 PSU VC4.0.SCH C274.

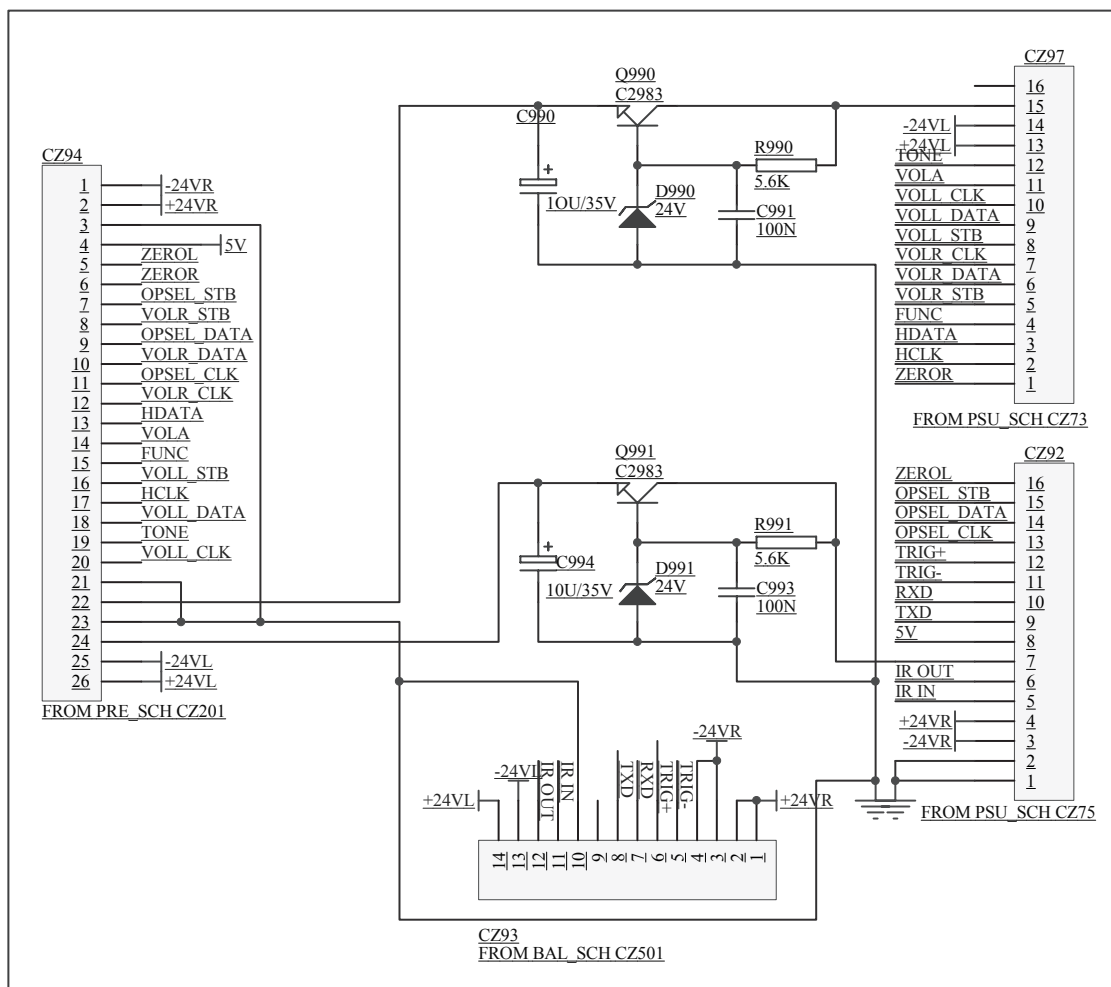
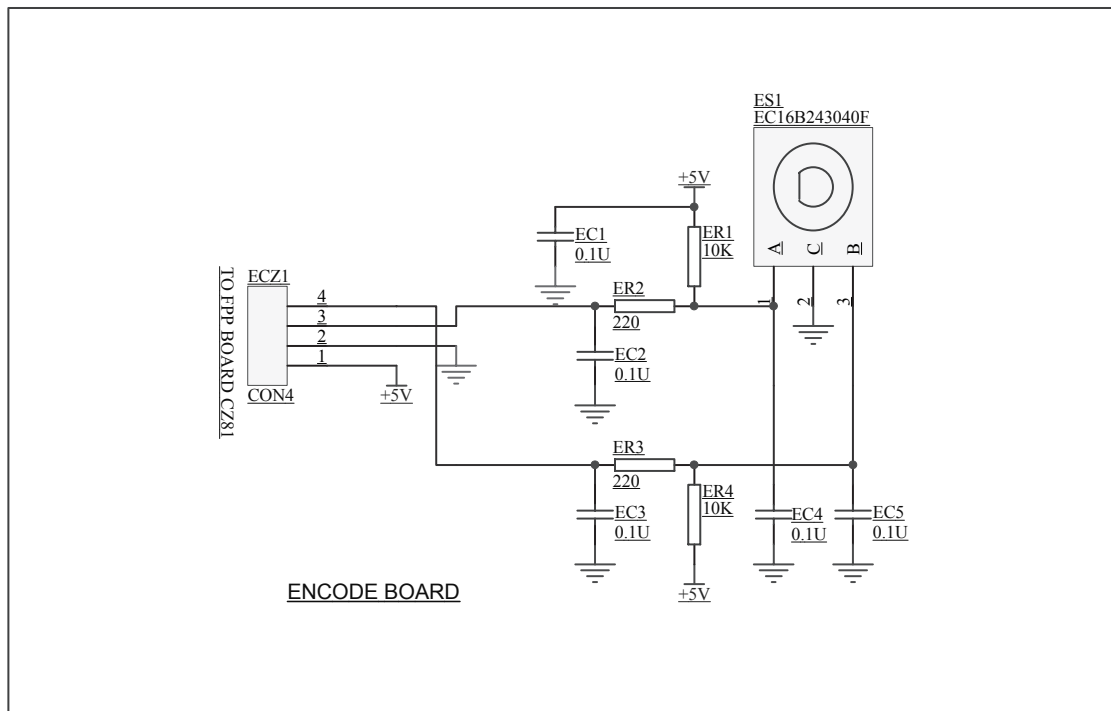
**Power Supply Section:**

- Transformer:** An R Core 10VA Transformer with primary windings (1-2, 3-4) and secondary windings (5-6, 7-8). The secondary windings are connected to a 4-pin connector (CZ908).
- Rectification:** Two full-bridge rectifiers (B901, B902) using DF1501S diodes. Each bridge has a 0.1uF/50V capacitor (C901, C902) connected to its input.
- Filtering:** Two electrolytic capacitors (C903, C904) are connected to the outputs of the rectifiers. C903 is 2200uF/16V and C904 is 1000uF/25V.
- Regulation:** An AMS1117-5.0 voltage regulator (IC1) is used to provide a 5V output. It has a 0.1uF/50V capacitor (C905) on its input and a 100uF/10V capacitor (C907) on its output.
- Output:** The 5V output is connected to a 4-pin connector (CZ902).

**Speaker Connector Boards:**

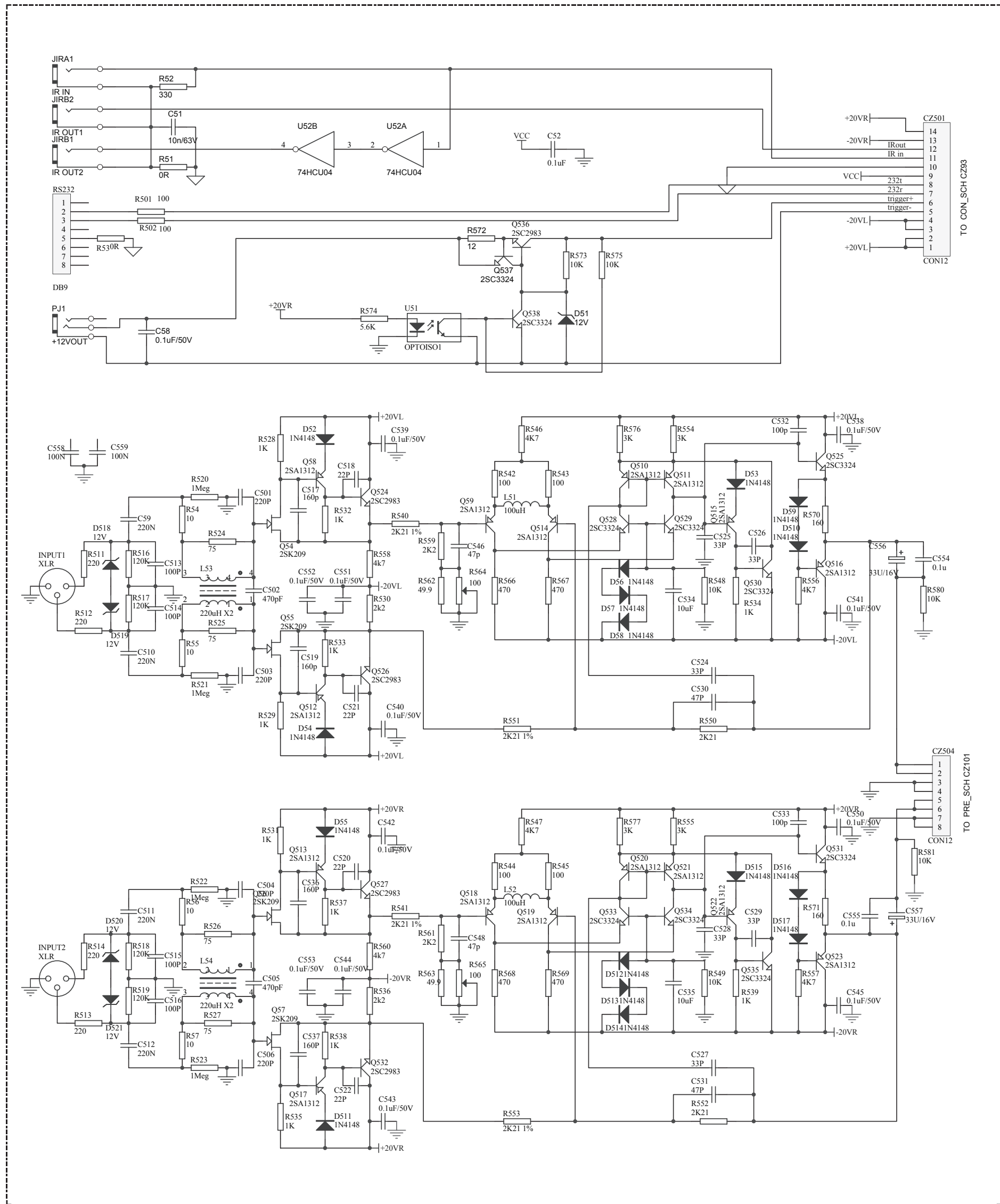
- LCH SPEAKER CONNECTOR BOARD:** An 8-pin Molex connector (CZS1) is connected to four 120V/5A/250V and 230V/3.15A/250V fuses (F901, F902, F903, F904). The fuses are connected to a 4-pin connector (CZ904).
- RCH SPEAKER CONNECTOR BOARD:** An 8-pin Molex connector (CZS2) is connected to four 120V/5A/250V and 230V/3.15A/250V fuses (F905, F906, F907, F908). The fuses are connected to a 4-pin connector (CZ903).

## 4. ENCODER AND CONNECT BOARD





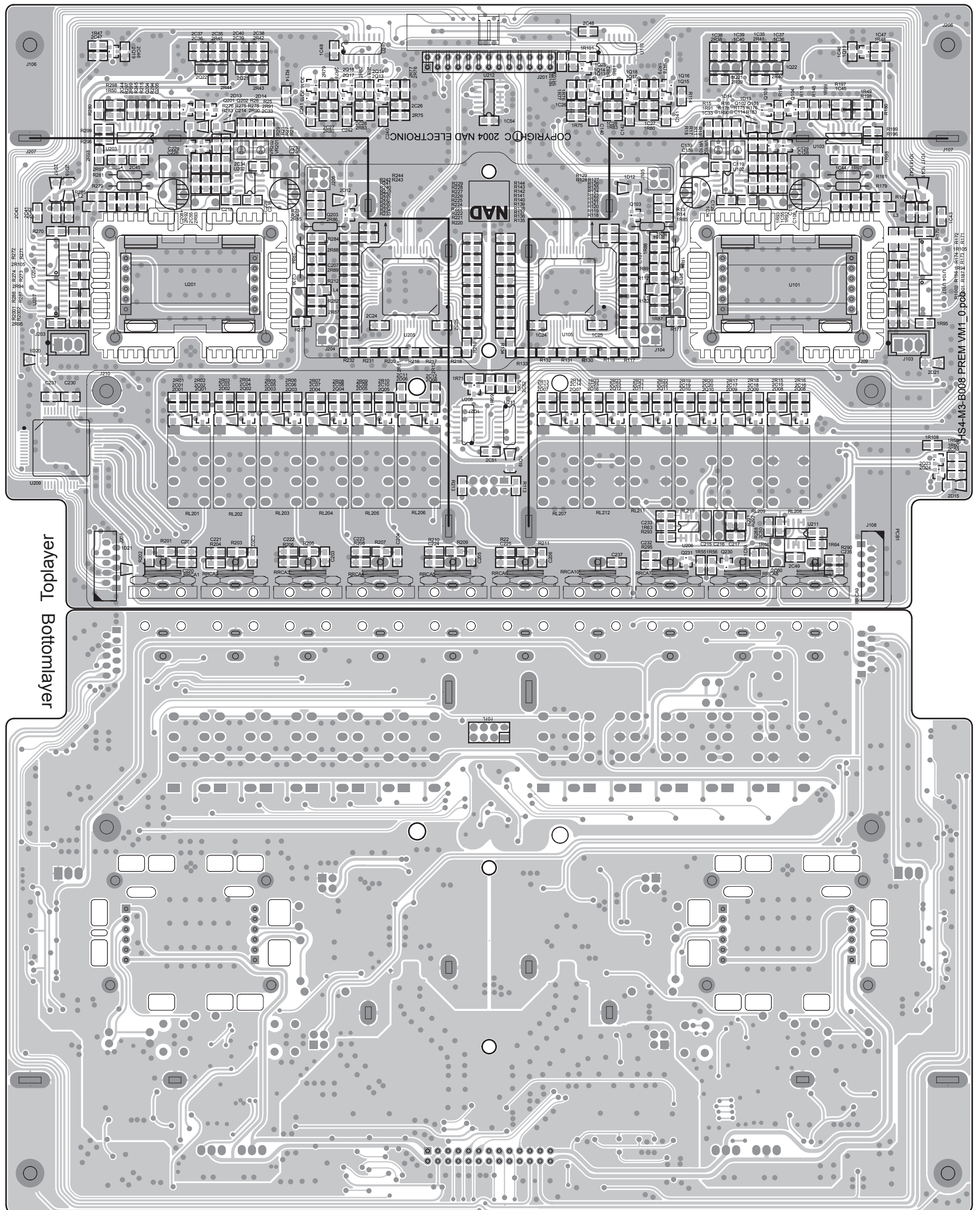
# 6. BALANCE INPUT BOARD



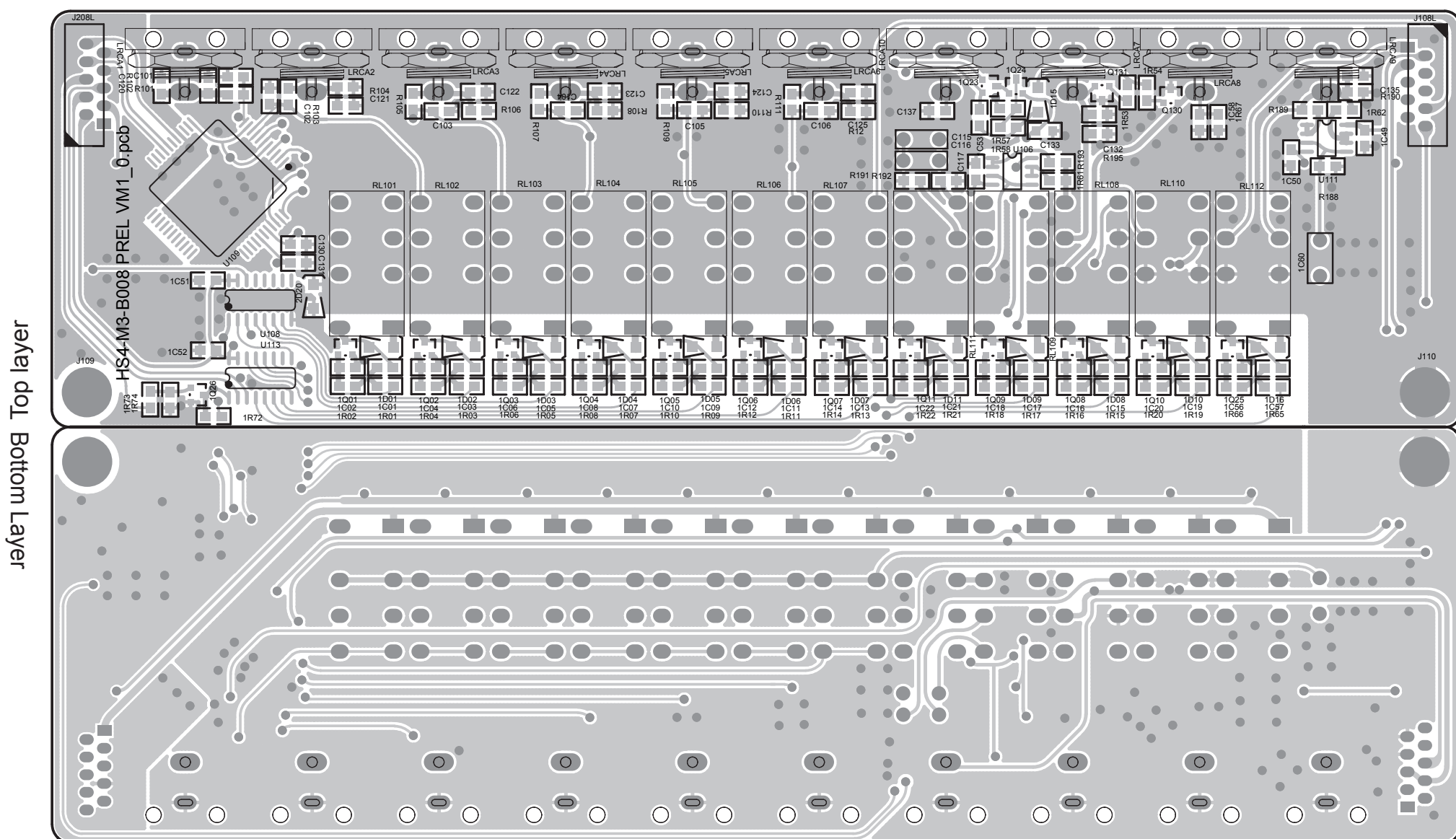


## PRINTED CIRCUIT DIAGRAMS

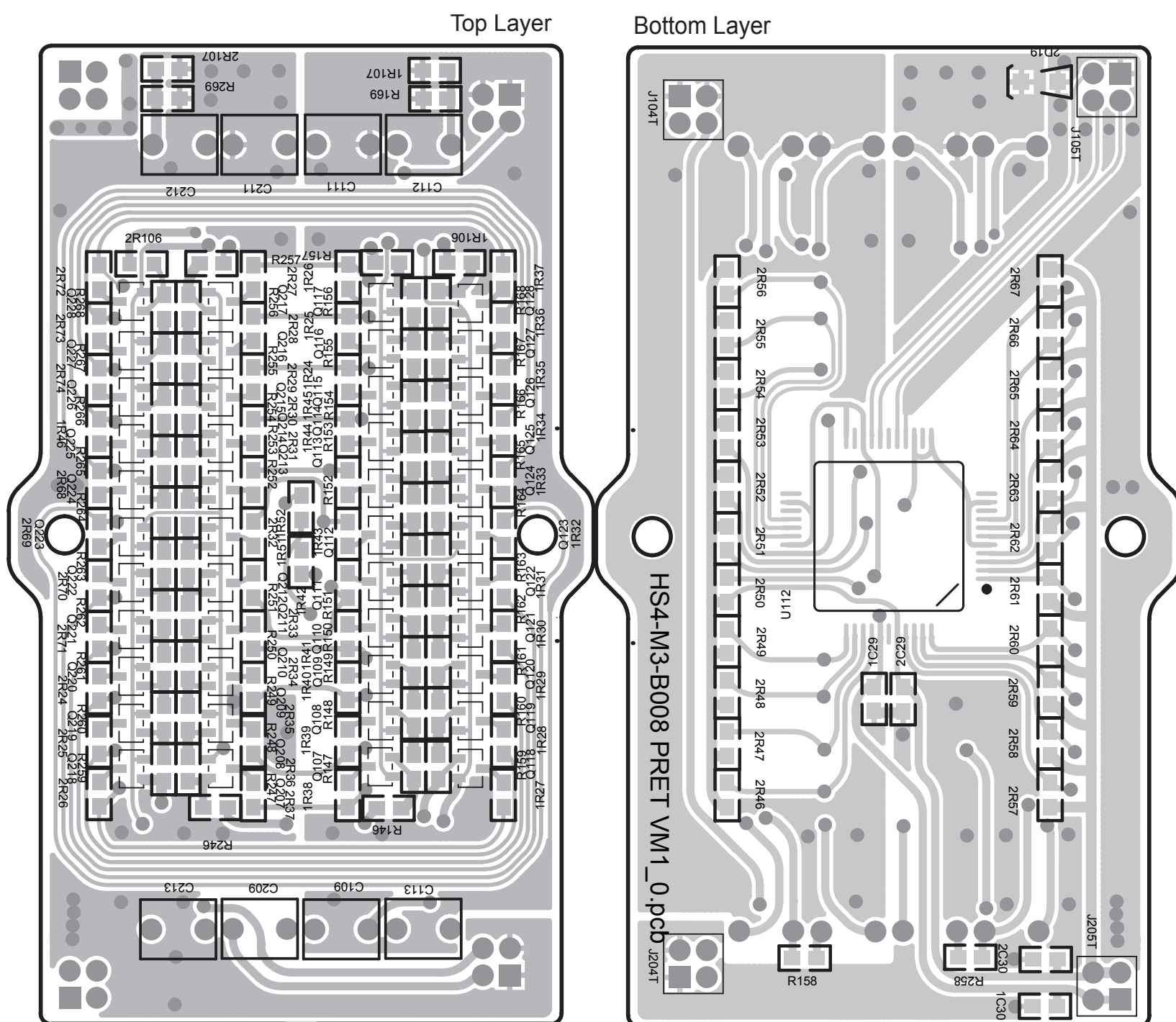
## 1. Preamp Main board(PREM)



## 2. Preamplifier LCH input board (PREL)

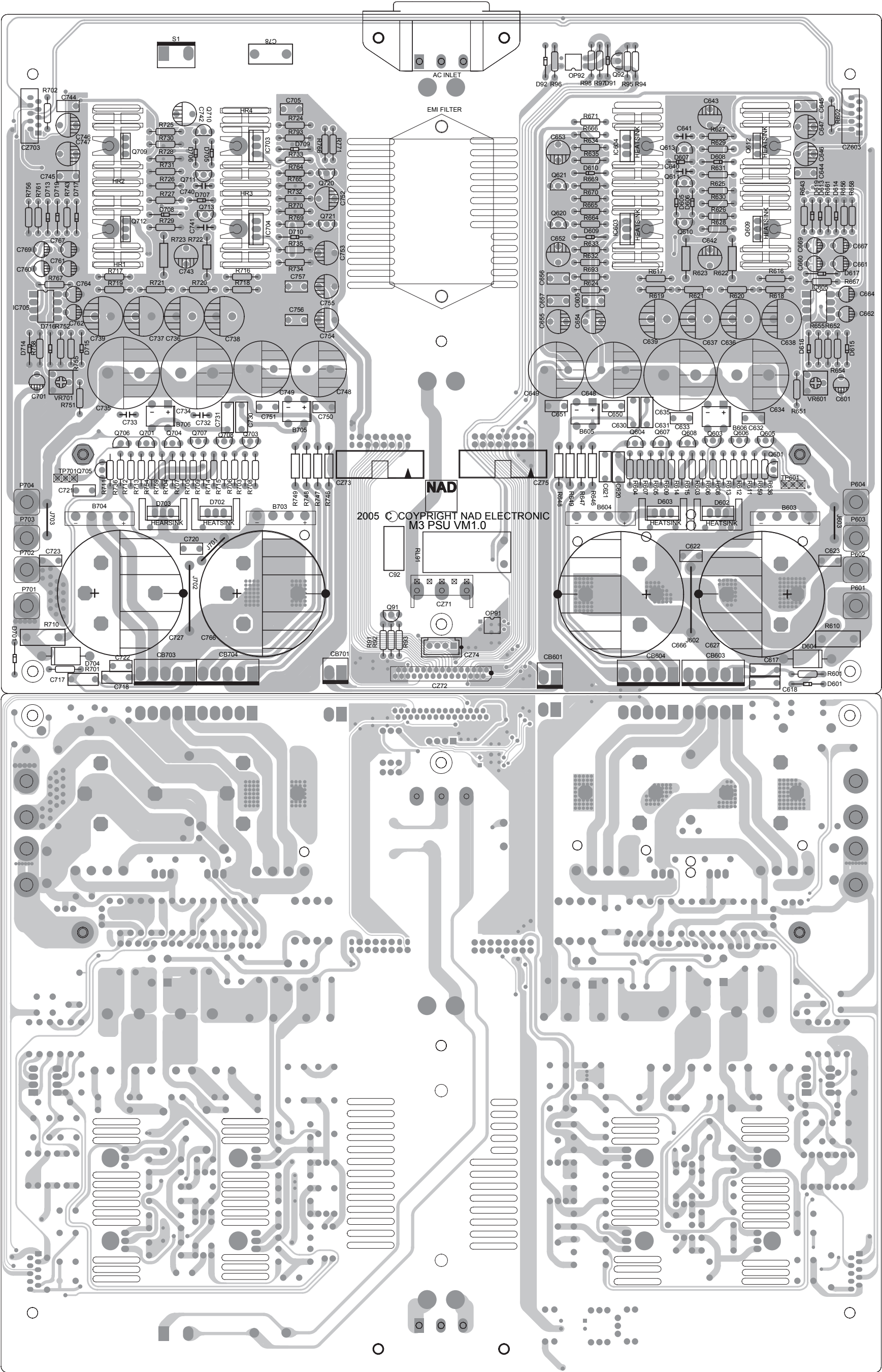


### 3. Preamp tone control board(PRET)

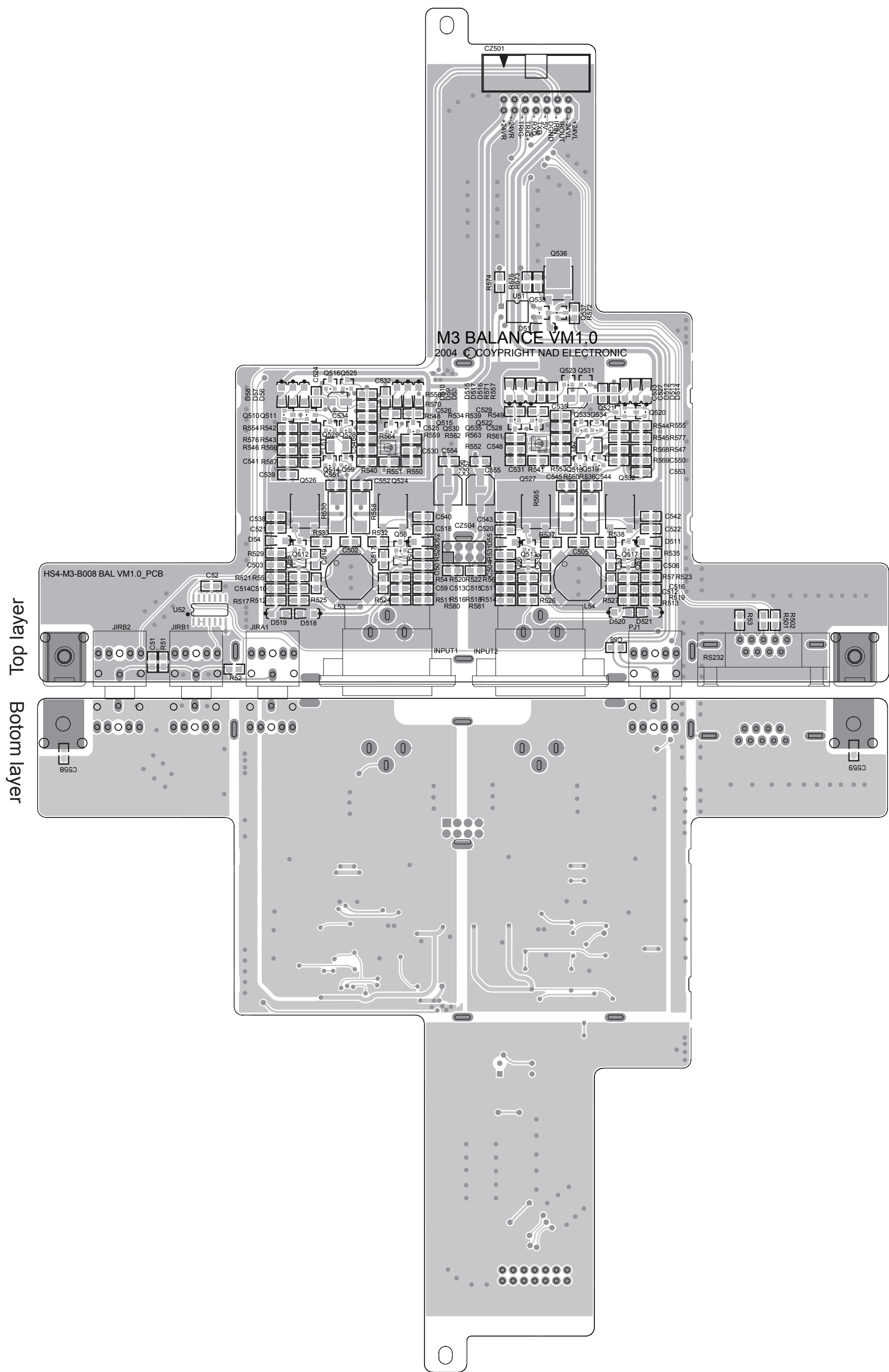


4. Power supply board(PSU)

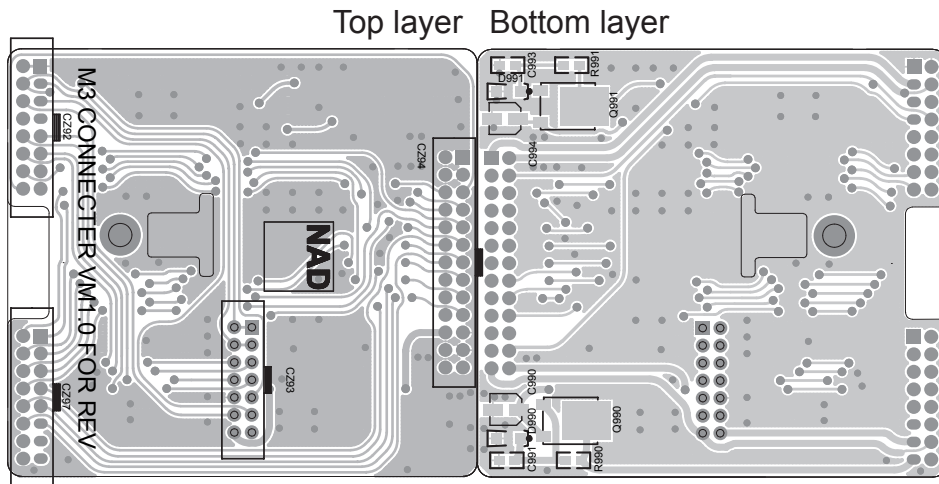
Top layer  
Bottom layer



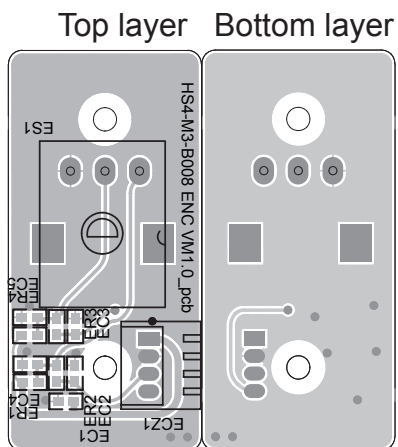
5. Balance amplifier board(BAL)



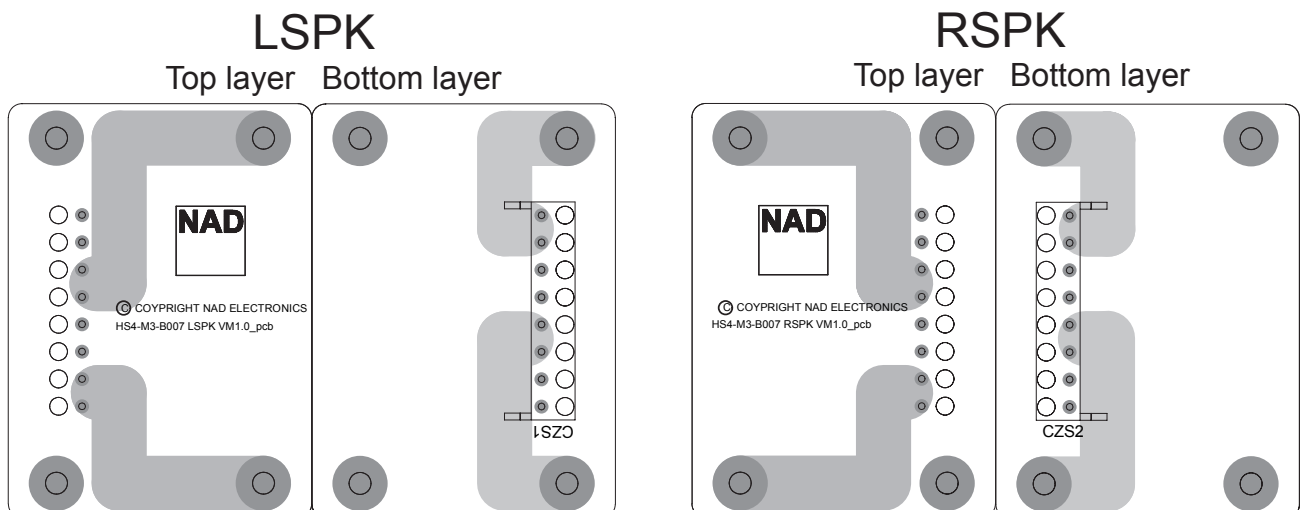
## 6. Connect board(CON)



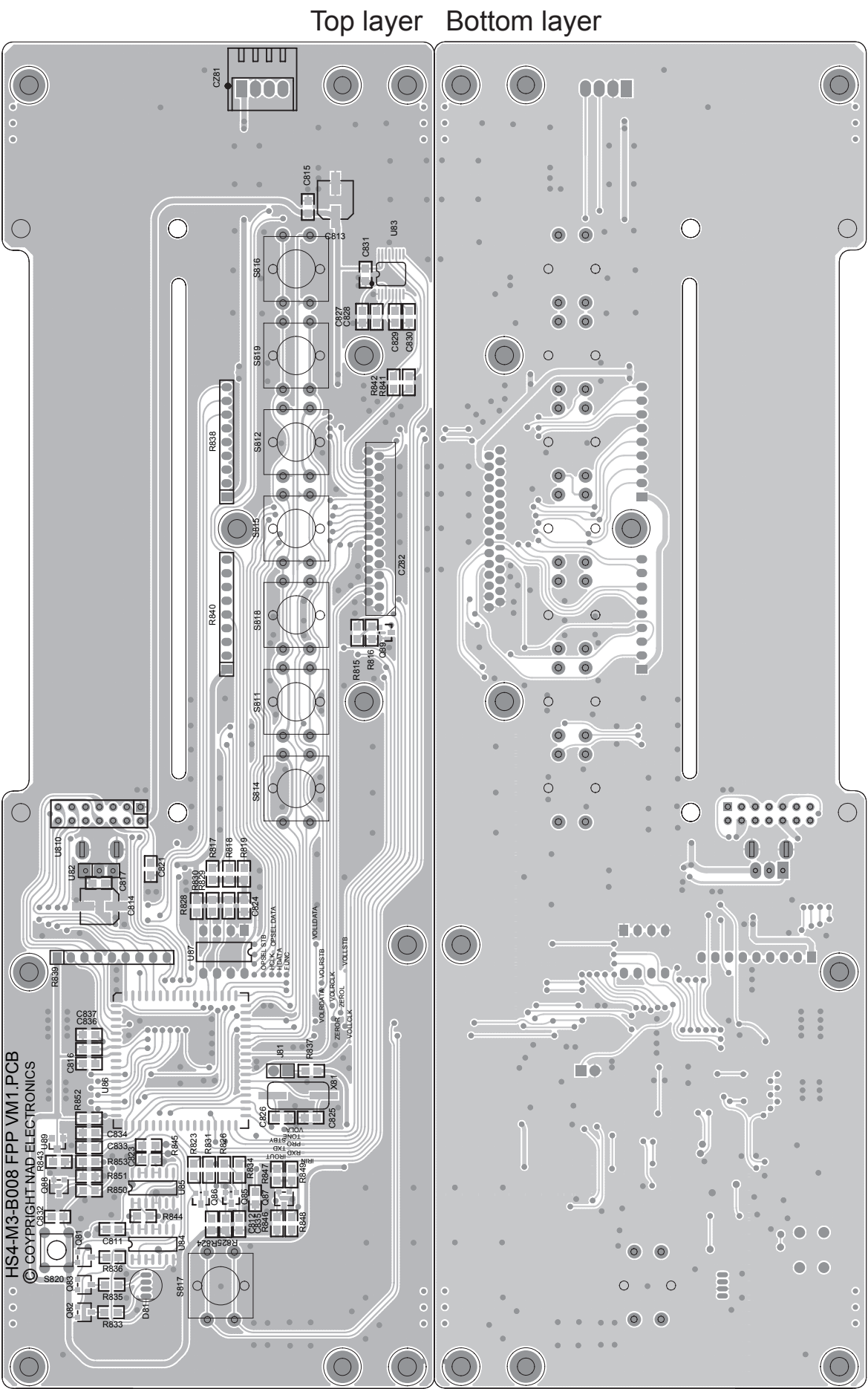
## 7. Encoder board(ENC)



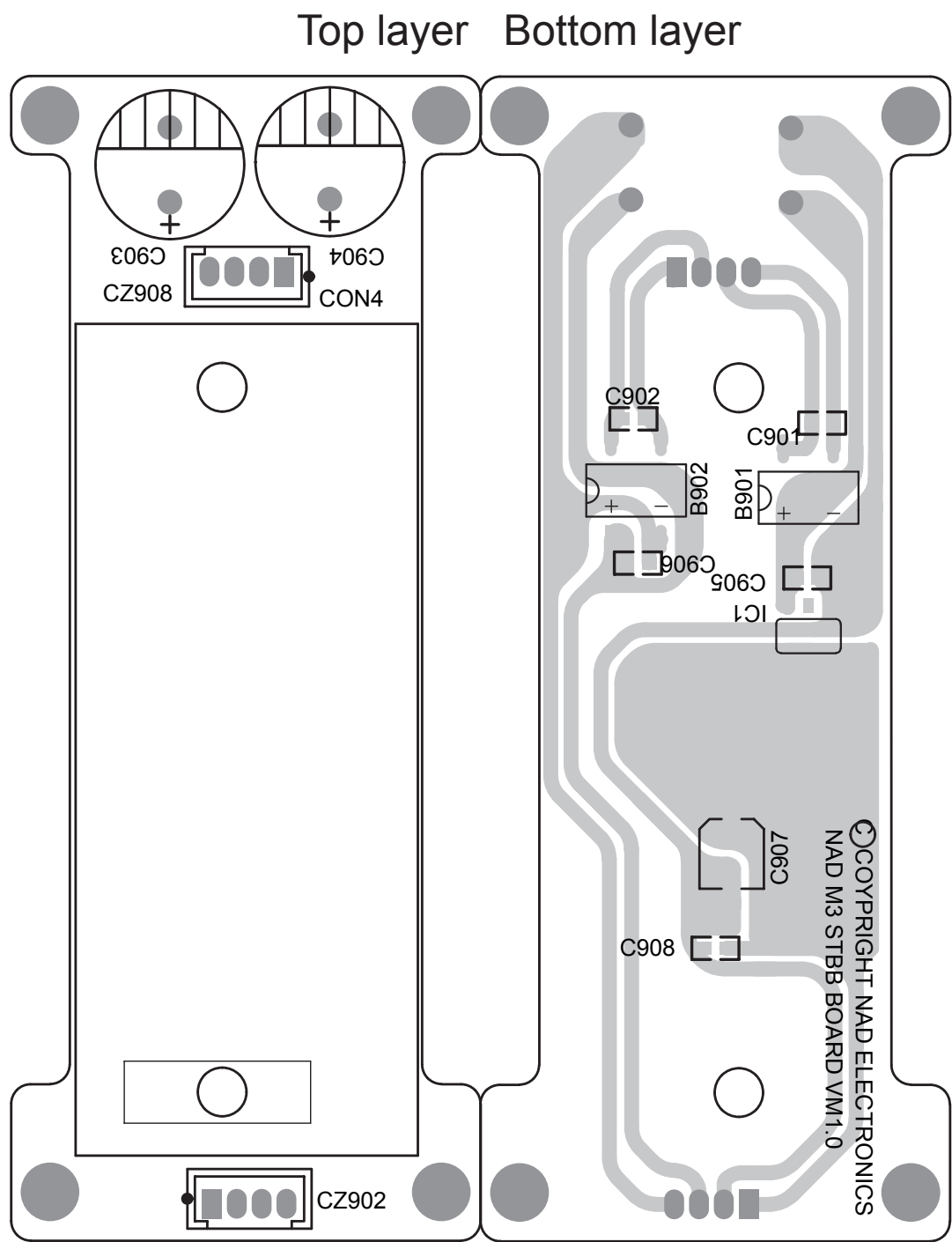
## 8. Speaker board(L/R SPK)



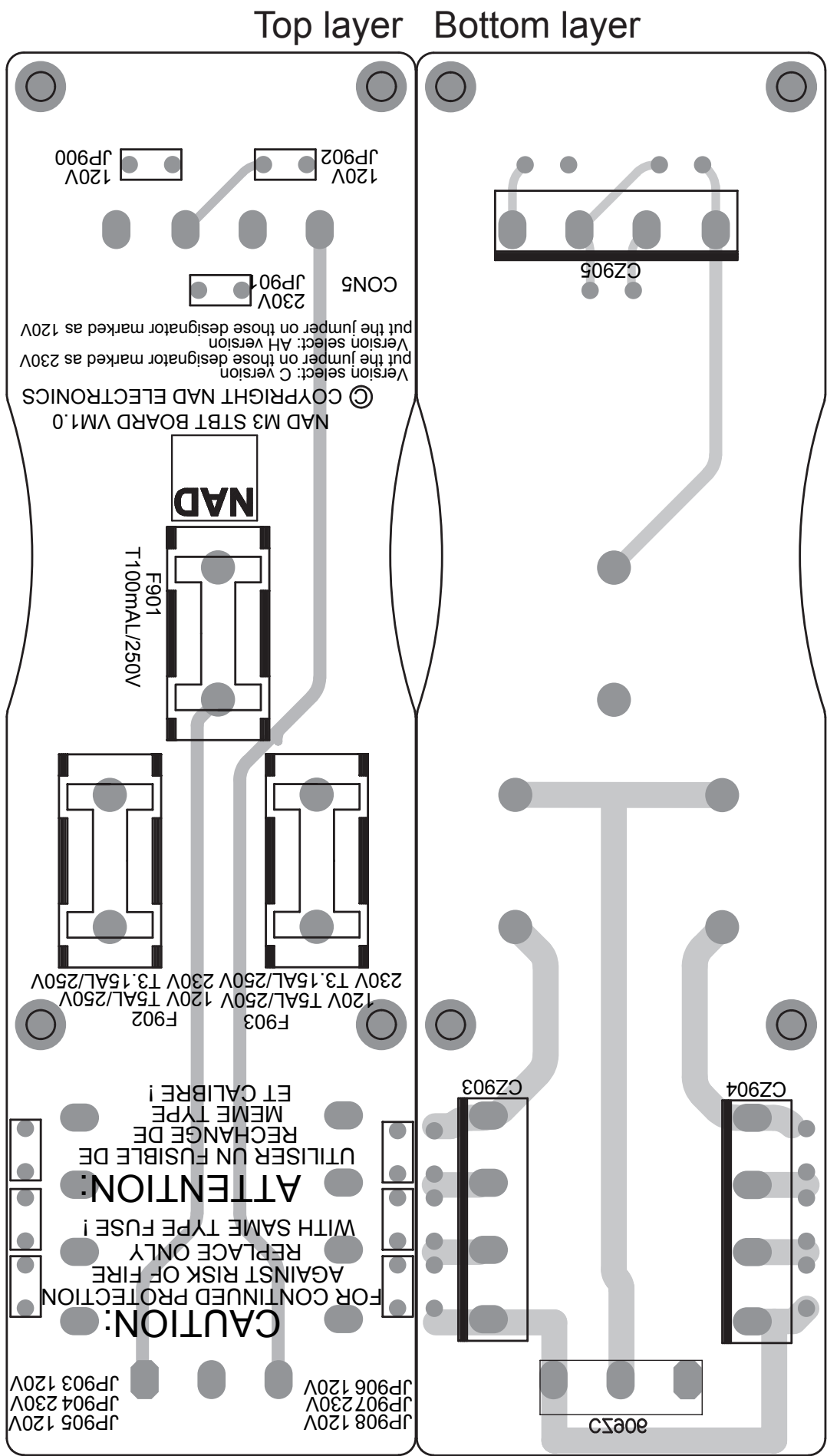
# 9. Front pannel board(FPP)



10. Standby board bottom(STBB)

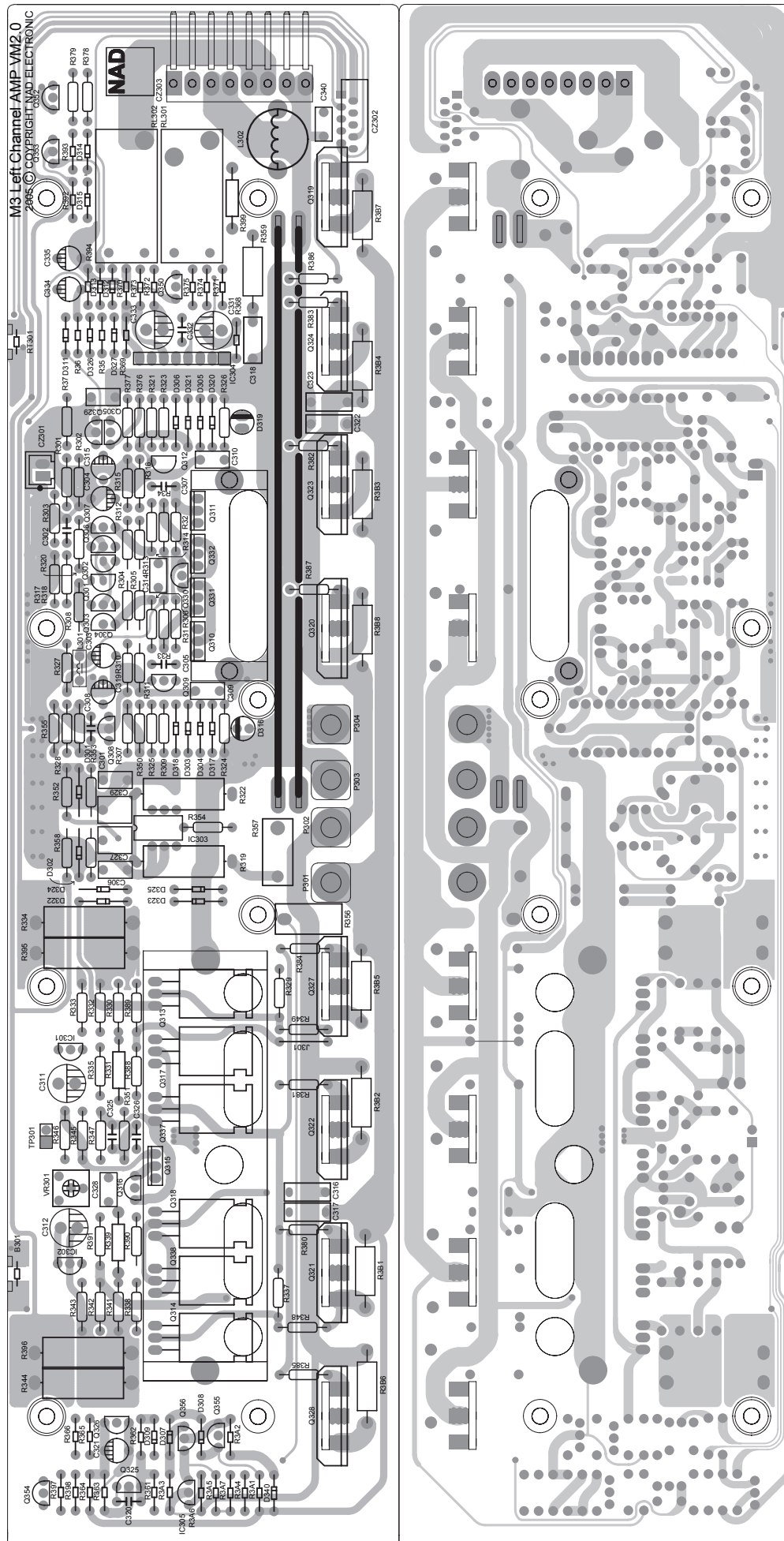


10. Standby board top(STBT)



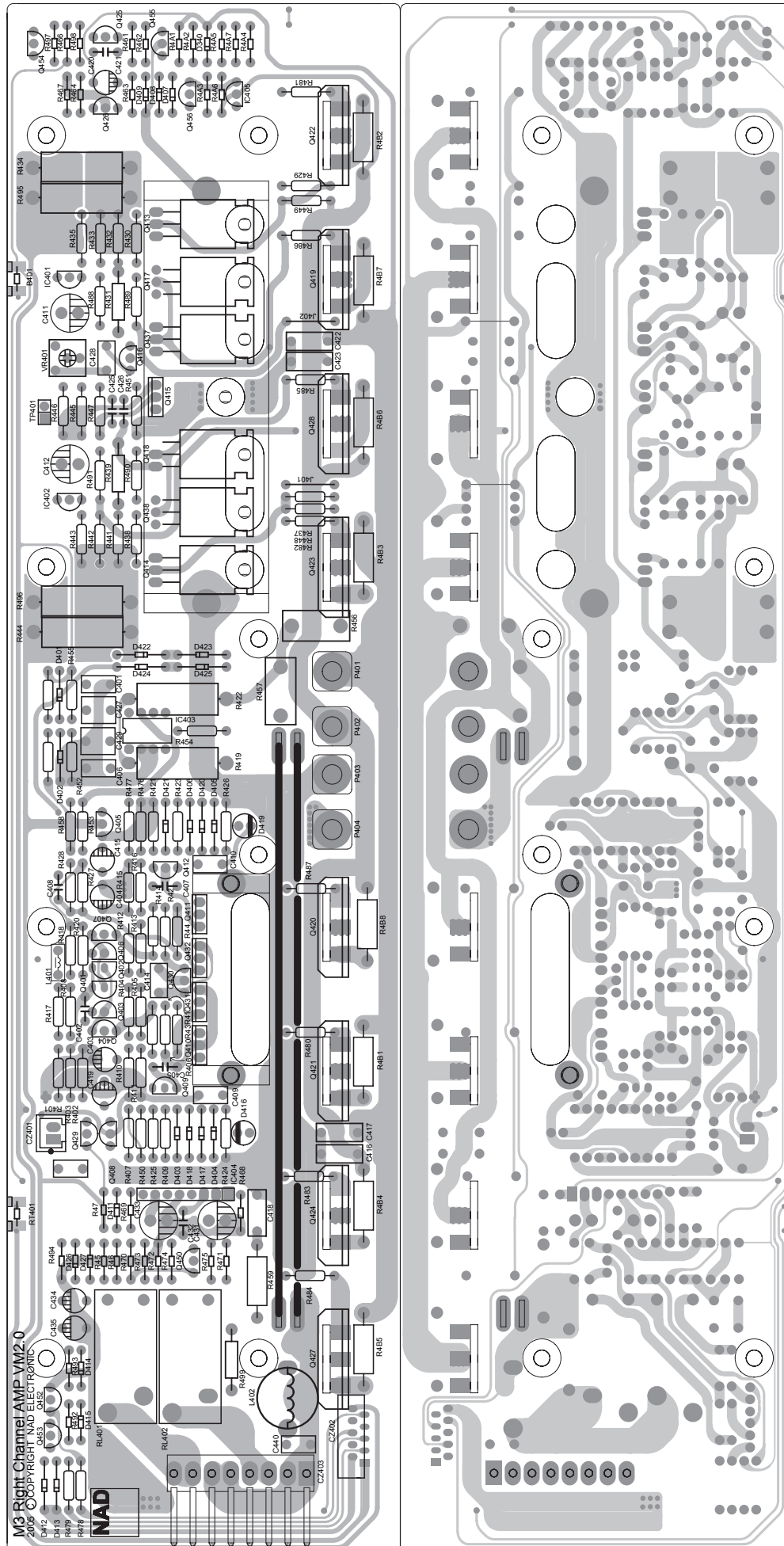
## 12. L channel amplifier board(AMPL)

Top layer      Bottom layer

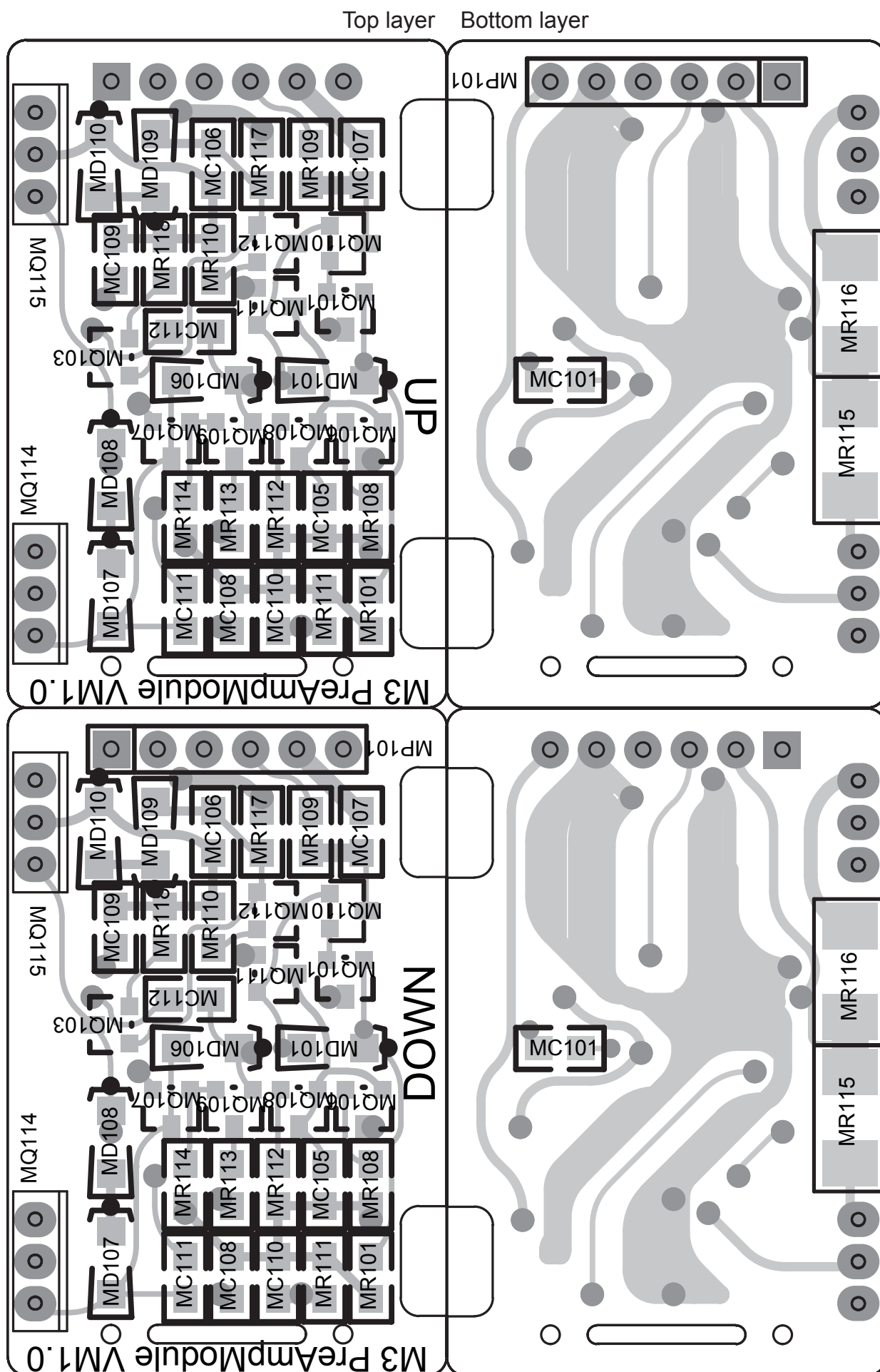


# 13. R channel amplifier board(AMPR)

Top layer Bottom layer



## 14. Preamp Module board(MOD)



## SECTION 5 REPLACEMENT PARTS LIST

MODEL :M3 C/AH(NAD)

RUN DATE : HS4-M3\_B013\_VM2.6

NOTES: ⚠ Warning Parts that are shaded are critical With respect to risk of fire or electrical shock.

| L                  | CP | P/N                              | Description                       | Part Type                          | Designator                                                                                   | Footprint     | Qty |
|--------------------|----|----------------------------------|-----------------------------------|------------------------------------|----------------------------------------------------------------------------------------------|---------------|-----|
| <b>0</b>           |    | <b>C VERSION P/N 00-50300-20</b> | <b>AH VERSION P/N 00-50300-10</b> | <b>CH VERSION P/N: 00-50300-30</b> |                                                                                              |               |     |
| <b>.1</b>          |    | <b>P/N:01-50301-00</b>           | <b>BALANCE BOARD</b>              |                                    |                                                                                              |               |     |
| <b>DIODE</b>       |    |                                  |                                   |                                    |                                                                                              |               |     |
| ..2                |    | 33-44148-11                      | Switch Diode SMD                  | LL4148                             | D52, D53, D54, D55, D56, D57, D58, D59, D510, D511, D512, D513, D514, D515, D516, D517       | MINIMELF      | 16  |
| ..2                |    | 33-11200-11                      | Zener Diode SMD                   | 12V/0.5W                           | D518, D519, D520, D521                                                                       | MINIMELF      | 4   |
| ..2                |    | 33-11300-12                      | Zener Diode SMD                   | HZK12B, 13V/0.5W                   | D51                                                                                          | LLD           | 1   |
| ..2                |    | or33-11300-12                    | Zener Diode SMD                   | DL5242B, 12.1V~12.75V              | D51                                                                                          | MINIMELF      | 1   |
| <b>TRANSISTORS</b> |    |                                  |                                   |                                    |                                                                                              |               |     |
| <b>TRANSISTO</b>   |    | 31-01312-00                      | Transistor                        | 2SA1312GR                          | Q58, Q59, Q510, Q511, Q512, Q513, Q514, Q515, Q516, Q517, Q518, Q519, Q520, Q521, Q522, Q523 | SOT-23A       | 16  |
| <b>TRANSISTO</b>   |    | 31-03324-00                      | Transistor                        | 2SC3324GR                          | Q525, Q528, Q529, Q530, Q531, Q533, Q534, Q535, Q537, Q538                                   | SOT-23A       | 10  |
| <b>TRANSISTO</b>   |    | 31-00209-00                      | Transistor                        | 2SK209GR                           | Q54, Q55, Q56, Q57                                                                           | SC-59         | 4   |
| <b>TRANSISTO</b>   |    | 31-02983-01                      | NPN Transistor                    | 2SC2983Y                           | Q526, Q524, Q536, Q527, Q532                                                                 | 2-7J1A        | 5   |
| <b>TRANSISTO</b>   |    | 03-00817-00                      | Optiosolator                      | PC817B                             | U51                                                                                          | DIP4          | 1   |
| <b>ICS</b>         |    |                                  |                                   |                                    |                                                                                              |               |     |
| ..2                |    | 03-00004-03                      | 6-Inverter                        | 74HC04                             | U52                                                                                          | SOIC14        | 1   |
| <b>CAPACITORS</b>  |    |                                  |                                   |                                    |                                                                                              |               |     |
| ..2                |    | 26-22051-01                      | Ceramic Chip Capacitor            | 22pF, 50V, ±5%                     | C518, C520, C521, C522                                                                       | 0805          | 4   |
| ..2                |    | 26-33051-01                      | Ceramic Chip Capacitor            | 33pF, 50V, ±5%                     | C524, C525, C526, C527, C528, C529                                                           | 0805          | 6   |
| ..2                |    | 26-47051-01                      | Ceramic Chip Capacitor            | 47pF, 50V, ±5%                     | C530, C531, C548, C546                                                                       | 0805          | 4   |
| ..2                |    | 26-10151-01                      | Ceramic Chip Capacitor            | 100pF, 50V, ±5%                    | C513, C514, C515, C516, C532, C533,                                                          | 0805          | 6   |
| ..2                |    | 26-16151-01                      | Ceramic Chip Capacitor            | 160pF, 50V, ±5%                    | C517, C519, C536, C537                                                                       | 0805          | 4   |
| ..2                |    | 26-22151-01                      | Ceramic Chip Capacitor            | 220pF, 50V, ±5%                    | C501, C503, C504, C506                                                                       | 0805          | 4   |
| ..2                |    | 26-47151-01                      | Ceramic Chip Capacitor            | 470pF, 50V, ±5%                    | C502, C505                                                                                   | 0805          | 2   |
| ..2                |    | 26-10351-01                      | Ceramic Chip Capacitor            | 10nF, 50V, ±10%                    | C51                                                                                          | 0805          | 1   |
| ..2                |    | 26-10421-01                      | Ceramic Chip Capacitor            | 0.1uF, 25V, ±10%                   | C58, C539, C540, C541, C542, C543, C544, C545, C538, C550, C551, C552, C553, C554, C555      | 0805          | 15  |
| ..2                |    | 26-10451-01                      | Ceramic Chip Capacitor            | 0.1uF, 50V, +80%-20%               | C52                                                                                          | 0805          | 1   |
| ..2                |    | 26-22421-01                      | Ceramic Chip Capacitor            | 0.22uF, 25V, ±10%                  | C59, C510, C511, C512                                                                        | 0805          | 4   |
| ..2                |    | 06-10031-02                      | Chip Alu Electrolytic Capacitor   | 10uF, 35V, ±20%                    | C534, C535                                                                                   | 5×5.4         | 2   |
| ..2                |    | 06-33011-04                      | Chip Alu Electrolytic Capacitor   | 33uF, 16V, ±20%                    | C556, C557                                                                                   | 6.3×5.4       | 2   |
| <b>RESISTORS,</b>  |    |                                  |                                   |                                    |                                                                                              |               |     |
| ..2                |    | 07-90000-01                      | Chip Resistor                     | 0Ω, ±5%                            | R51, R53                                                                                     | 0805          | 2   |
| ..2                |    | 07-90100-01                      | Chip Resistor                     | 10Ω, ±5%                           | R54, R55, R56, R57                                                                           | 0805          | 4   |
| ..2                |    | 07-90120-01                      | Chip Resistor                     | 12Ω, ±5%                           | R572                                                                                         | 0805          | 1   |
| ..2                |    | 07-94999-11                      | Chip Resistor                     | 49.9Ω, ±1%                         | R562, R563                                                                                   | 0805          | 2   |
| ..2                |    | 07-90750-01                      | Chip Resistor                     | 75Ω, ±5%                           | R524, R525, R526, R527                                                                       | 0805          | 4   |
| ..2                |    | 07-90101-01                      | Chip Resistor                     | 100Ω, ±5%                          | R501, R502, R542, R543, R544, R545                                                           | 0805          | 6   |
| ..2                |    | 07-90161-01                      | Chip Resistor                     | 160Ω, ±5%                          | R570, R571                                                                                   | 0805          | 2   |
| ..2                |    | 07-90221-01                      | Chip Resistor                     | 220Ω, ±5%                          | R511, R512, R513, R514                                                                       | 0805          | 4   |
| ..2                |    | 07-90331-01                      | Chip Resistor                     | 330Ω, ±5%                          | R52                                                                                          | 0805          | 1   |
| ..2                |    | 07-90471-01                      | Chip Resistor                     | 470Ω, ±5%                          | R566, R567, R568, R569                                                                       | 0805          | 4   |
| ..2                |    | 07-90102-01                      | Chip Resistor                     | 1KΩ, ±5%                           | R528, R529, R531, R532, R533, R534, R535, R537, R538, R539                                   | 0805          | 10  |
| ..2                |    | 07-92201-11                      | Chip Resistor                     | 2K2Ω, ±1%                          | R559, R561                                                                                   | 0805          | 2   |
| ..2                |    | 07-92211-11                      | Chip Resistor                     | 2K21Ω, ±1%                         | R540, R541, R550, R551, R552, R553                                                           | 0805          | 6   |
| ..2                |    | 07-90302-01                      | Chip Resistor                     | 3K, ±5%                            | R555, R554, R576, R577                                                                       | 0805          | 4   |
| ..2                |    | 07-90472-01                      | Chip Resistor                     | 4K7Ω, ±5%                          | R556, R557, R546, R547                                                                       | 0805          | 4   |
| ..2                |    | 07-90562-01                      | Chip Resistor                     | 5.6KΩ, ±5%                         | R574                                                                                         | 0805          | 1   |
| ..2                |    | 07-90103-01                      | Chip Resistor                     | 10KΩ, ±5%                          | R573, R548, R549, R580, R581                                                                 | 0805          | 5   |
| ..2                |    | 07-90223-01                      | Chip Resistor                     | 22KΩ, ±5%                          | R575                                                                                         | 0805          | 1   |
| ..2                |    | 07-90124-01                      | Chip Resistor                     | 120KΩ, ±5%                         | R516, R517, R518, R519                                                                       | 0805          | 4   |
| ..2                |    | 07-90105-01                      | Chip Resistor                     | 1MΩ, ±5%                           | R520, R521, R522, R523                                                                       | 0805          | 4   |
| ..2                |    | 07-90222-06                      | Chip Resistor                     | 2K2Ω, 1W, ±5%                      | R530, R536                                                                                   | 2512          | 2   |
| ..2                |    | 07-90472-06                      | Chip Resistor                     | 4K7Ω, 1W, ±5%                      | R558, R560                                                                                   | 2512          | 2   |
| <b>INDUCTORS</b>   |    |                                  |                                   |                                    |                                                                                              |               |     |
| ..2                |    | 22-00221-00                      | Inductor                          | 220uH ×2                           | L53, L54                                                                                     | 220UH*2       | 2   |
| ..2                |    | 08-04101-00                      | Inductor SMD                      | 100uH                              | L51, L52                                                                                     | 1210          | 2   |
| <b>POT</b>         |    |                                  |                                   |                                    |                                                                                              |               |     |
| ..2                |    | 09-03101-00                      | Semi-POT                          | 100Ω 20%                           | R564, R565                                                                                   |               | 2   |
| <b>CONNECTORS</b>  |    |                                  |                                   |                                    |                                                                                              |               |     |
| ..2                |    | 13-12508-22                      | CONNECTOR                         | 8PIN(L=29.5mm)                     | CZ504                                                                                        | S=2.5mm       | 1   |
| ..2                |    | 13-22514-01                      | CONNECTOR                         | 3012-14GRB                         | CZ501                                                                                        | FFC12/S=2.5mm | 1   |
| ..2                |    | 17-08009-00                      | PORT                              | DB9, 7906-9-F-B                    | RS232                                                                                        |               | 1   |
| ..2                |    | 17-09003-04                      | CONNECTOR                         | E303A007                           | INPUT1, INPUT2                                                                               | XLR           | 2   |

| L                       | CP | P/N             | Description                     | Part Type                      | Designator                                                                                                                                     | Footprint | Qty |
|-------------------------|----|-----------------|---------------------------------|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-----|
| ..2                     |    | 17-02001-04     | 3.5PHONE JACK1                  | ST-323B-04/CKX-3.5-02-3P       | PJ1, JIRA1, JIRB1, JIRB2                                                                                                                       | PHONE1    | 4   |
| ..2                     |    | or17-02001-03   | 3.5PHONE JACK1                  | SCJ349P00×S0B01                | PJ1, JIRA1, JIRB1, JIRB2                                                                                                                       | PHONE1    | 4   |
|                         |    |                 |                                 |                                |                                                                                                                                                |           |     |
| <b>PCB</b>              |    |                 |                                 |                                |                                                                                                                                                |           |     |
| ..2                     |    | 16-53001-00     | MULTI PCB                       | FR-4, 1.6mm, 200mm×80mm        |                                                                                                                                                |           | 1   |
| ...3                    |    | 16-53010-00     | PCB                             | FR-4, 1.6mm, 170mm×320mm       |                                                                                                                                                |           | 1/6 |
|                         |    |                 |                                 |                                |                                                                                                                                                |           |     |
| <b>MECHANICAL PARTS</b> |    |                 |                                 |                                |                                                                                                                                                |           |     |
| ..2                     |    | 66-011011-0     | Connectible Bracket             | SECC N4 T=1.0                  |                                                                                                                                                |           | 2   |
| ..2                     |    | 61-023106-0     | Self Taping Screws              | STB3×6                         |                                                                                                                                                |           | 2   |
| ..2                     |    | 66-048004-0     | Blance pcb shielding            | TIN T=0.5                      |                                                                                                                                                |           | 1   |
|                         |    |                 |                                 |                                |                                                                                                                                                |           |     |
| .1                      |    | P/N:01-50304-00 | KEY BOARD                       |                                |                                                                                                                                                |           |     |
| <b>DIODE</b>            |    |                 |                                 |                                |                                                                                                                                                |           |     |
| ..2                     |    | 33-50565-02     | LED                             | φ5 THREE COLOR LED             | D81                                                                                                                                            |           | 1   |
|                         |    |                 |                                 |                                |                                                                                                                                                |           |     |
| <b>TRANSISTORS</b>      |    |                 |                                 |                                |                                                                                                                                                |           |     |
| ..2                     |    | 31-01015-01     | PNP TRANS                       | 2SA1015                        | Q86                                                                                                                                            | SC-59     | 1   |
| ..2                     |    | 31-01815-01     | NPN TRANS                       | 2SC1815                        | Q85                                                                                                                                            | SC-59     | 1   |
| ..2                     |    | 31-03326-01     | Transistor                      | 2SC3326A                       | Q87, Q88, Q89                                                                                                                                  | SC-59     | 3   |
| ..2                     |    | 31-00114-01     | Digital transistor              | DTA114EKA                      | Q81, Q82, Q83                                                                                                                                  | SC-59     | 3   |
|                         |    |                 |                                 |                                |                                                                                                                                                |           |     |
| <b>ICS</b>              |    |                 |                                 |                                |                                                                                                                                                |           |     |
| ..2                     |    | 03-08951-11     | SINGLE-CHIP                     | AT89C51ED2                     | U86                                                                                                                                            | PLCC68    | 1   |
| ..2                     |    | 03-02416-01     | EEPROM                          | 24C16                          | U87                                                                                                                                            | DIP8      | 1   |
| ..2                     |    | 03-00810-01     | Watch Dog                       | TCM810LENB                     | U89                                                                                                                                            | SOT-23B   | 1   |
| ..2                     |    | 03-00038-40     | IR RECEIVER                     | HS0038B4                       | U82                                                                                                                                            |           | 1   |
| ..2                     |    | 23-30202-00     | VFD MODULE                      | 20T202DA1 (J) REVE             | U810                                                                                                                                           |           | 1   |
| ..2                     |    | 03-03221-02     | RS232 RECEIVER                  | MA×3221                        | U83                                                                                                                                            | SSOP16    | 1   |
| ..2                     |    | 03-00000-02     | Quad 2-Input NAND Gate          | 74AC00D                        | U84, U85                                                                                                                                       | SOIC14    | 2   |
| ..2                     |    | or03-00000-01   | Quad 2-Input NAND Gate          | 74AC00SC/MC74AC00D             | U84, U85                                                                                                                                       | SOIC14    | 2   |
|                         |    |                 |                                 |                                |                                                                                                                                                |           |     |
| <b>CAPACITORS</b>       |    |                 |                                 |                                |                                                                                                                                                |           |     |
| ..2                     |    | 26-20051-01     | Ceramic Chip Capacitor          | 20pF, 50V, ±5%                 | C825, C826                                                                                                                                     | 0805      | 2   |
| ..2                     |    | 26-10251-11     | Ceramic Chip Capacitor          | 1nF, 50V, ±5%                  | C810, C833, C834, C835, C836, C837                                                                                                             | 0805      | 6   |
| ..2                     |    | 26-10351-01     | Ceramic Chip Capacitor          | 10nF, 50V, ±5%                 | C812                                                                                                                                           | 0805      | 1   |
| ..2                     |    | 26-10451-01     | Ceramic Chip Capacitor          | 0.1uF, 50V, +80%-20%           | C811, C815, C816, C817, C821, C824, C827, C828, C829, C830, C831, C832, C823                                                                   | 0805      | 13  |
| ..2                     |    | 06-10121-05     | Chip Alu Electrolytic Capacitor | 100uF, 25V, ±20%               | C813, C814                                                                                                                                     | 6.3×7.7   | 2   |
|                         |    |                 |                                 |                                |                                                                                                                                                |           |     |
| <b>RESISTORS</b>        |    |                 |                                 |                                |                                                                                                                                                |           |     |
| ..2                     |    | 07-90000-01     | Chip Resistor                   | 0Ω, 0805                       | R841, R842                                                                                                                                     | 0805      | 2   |
| ..2                     |    | 07-90332-01     | Chip Resistor                   | 3.3K Ω, 0805, ±5%              | R816                                                                                                                                           | 0805      | 1   |
| ..2                     |    | 07-90220-11     | Chip Resistor                   | 22Ω, 0805, ±5%                 | R823                                                                                                                                           | 0805      | 1   |
| ..2                     |    | 07-90331-01     | Chip Resistor                   | 330Ω, 0805, ±5%                | R833, R835, R836                                                                                                                               | 0805      | 3   |
| ..2                     |    | 07-90103-01     | Chip Resistor                   | 10KΩ, 0805, ±5%                | R817, R818, R819, R824, R828, R829, R830, R831, R834, R837, R843, R844, R845, R846, R847, R849, R850, R851, R853, R825, R826, R848, R852, R815 | 0805      | 24  |
| ..2                     |    | 07-01002-09     | Resistor Net                    | 10KΩ × 8, ±2%, A               | R838, R840, R839                                                                                                                               | SIP9      | 3   |
|                         |    |                 |                                 |                                |                                                                                                                                                |           |     |
| <b>CRYSTALS</b>         |    |                 |                                 |                                |                                                                                                                                                |           |     |
| ..2                     |    | 04-11102-01     | CRYSTAL SMD                     | 11.0592MHz                     | X81                                                                                                                                            |           | 1   |
|                         |    |                 |                                 |                                |                                                                                                                                                |           |     |
| <b>SWITCHES</b>         |    |                 |                                 |                                |                                                                                                                                                |           |     |
| ..2                     |    | 11-04101-08     | Tact Switch                     | IT-1103AA-1160                 | S811, S812, S814, S815, S816, S817, S818, S819                                                                                                 | KEY1      | 8   |
| ..2                     |    | 11-04101-00     | Tact Switch                     | IT-1102D-1160                  | S821                                                                                                                                           | KEY       | 1   |
|                         |    |                 |                                 |                                |                                                                                                                                                |           |     |
| <b>CONNECTERS</b>       |    |                 |                                 |                                |                                                                                                                                                |           |     |
| ..2                     |    | 13-12502-00     | Connector                       | 2PIN, 2.54                     | J81                                                                                                                                            | S=2.5mm   | 1   |
| ..2                     |    | 13-12514-03     | Connector                       | 14PIN, 2.54, 8mm               | CZ80                                                                                                                                           | S=2.5mm   | 1   |
| ..2                     |    | 13-22504-05     | Connector                       | XHB 4PIN                       | CZ81                                                                                                                                           | S=2.5mm   | 1   |
| ..2                     |    | 13-21030-03     | FFC Socket                      | 1.0S-15S-30PW                  | CZ82                                                                                                                                           |           | 1   |
|                         |    |                 |                                 |                                |                                                                                                                                                |           |     |
| <b>PCB</b>              |    |                 |                                 |                                |                                                                                                                                                |           |     |
| ..2                     |    | 16-53004-10     | FPP PCB                         | VM2.0, FR-4, 1.6mm, 250mm×80mm |                                                                                                                                                |           | 1   |
|                         |    |                 |                                 |                                |                                                                                                                                                |           |     |
| <b>MECHANICAL PARTS</b> |    |                 |                                 |                                |                                                                                                                                                |           |     |
| ..2                     |    | 66-048002-0     | IR Bracket                      | iron                           |                                                                                                                                                |           | 1   |
| ..2                     |    | 61-023508-0     | Machine Screws                  | MB3×8                          | FPP(4)                                                                                                                                         |           | 4   |
| ..2                     |    | 62-010302-1     | Nut                             | M3 NUT                         | FPP(4)                                                                                                                                         |           | 4   |
| ..2                     |    | 86-004002-0     | Red-Paper Pad                   | φ3×1                           | FPP(4)                                                                                                                                         |           | 4   |
|                         |    |                 |                                 |                                |                                                                                                                                                |           |     |
| .1                      |    | P/N:01-50302-00 | ENCODER BOARD                   |                                |                                                                                                                                                |           |     |

| L                                                                                 | CP | P/N         | Description                     | Part Type                  | Designator                                                                                                           | Footprint   | Qty            |
|-----------------------------------------------------------------------------------|----|-------------|---------------------------------|----------------------------|----------------------------------------------------------------------------------------------------------------------|-------------|----------------|
| <b>ENCODE</b>                                                                     |    |             |                                 |                            |                                                                                                                      |             |                |
| ..2                                                                               |    | 37-16243-00 | ENCODE                          | EC16B243040F               | ES1                                                                                                                  | ENCODE      | 1              |
| <b>CAPACITORS</b>                                                                 |    |             |                                 |                            |                                                                                                                      |             |                |
| ..2                                                                               |    | 26-10451-01 | Ceramic Chip Capacitor          | 0.1uF, 50V, +80%-20%       | EC1, EC2, EC3, EC4, EC5,                                                                                             | 0805        | 5              |
| <b>RESISTORS</b>                                                                  |    |             |                                 |                            |                                                                                                                      |             |                |
| ..2                                                                               |    | 07-90221-01 | Chip Resistor                   | 220Ω, 1/8W, ±5%            | ER2, ER3                                                                                                             | 0805        | 2              |
| ..2                                                                               |    | 07-90103-01 | Chip Resistor                   | 10K, 1/8W, ±5%             | ER1, ER4                                                                                                             | 0805        | 2              |
| <b>CONNECTERS</b>                                                                 |    |             |                                 |                            |                                                                                                                      |             |                |
| ..2                                                                               |    | 13-22504-05 | Connector                       | 4PIN, 2.54                 | ECZ1                                                                                                                 | S=2.5mm     | 1              |
| <b>PCB</b>                                                                        |    |             |                                 |                            |                                                                                                                      |             |                |
| ..2                                                                               |    | 16-53002-00 | ECODER PCB                      | FR-4, 1.6mm, 30mm×80mm     |                                                                                                                      |             | 1              |
| ...3                                                                              |    | 16-53010-00 | PCB                             | FR-4, 1.6mm, 170mm×320mm   |                                                                                                                      |             | 1/6            |
| <b>.1 C VERSION P/N:01-50307-21 AH VERSION P/N:01-50307-11 STANDBY BOARD(TOP)</b> |    |             |                                 |                            |                                                                                                                      |             |                |
| <b>CONNECTORS</b>                                                                 |    |             |                                 |                            |                                                                                                                      |             |                |
| ..2                                                                               |    | 13-23905-21 | Connector                       | 3PIN                       | CZ906                                                                                                                |             | 1              |
| ..2                                                                               |    | 13-23907-30 | Connector                       | 4PIN                       | CZ903, CZ904                                                                                                         |             | 2              |
| ..2                                                                               |    | 13-23907-31 | Connector                       | 4PIN                       | CZ905                                                                                                                |             | 1              |
| <b>JUMPER</b>                                                                     |    |             |                                 |                            |                                                                                                                      |             |                |
| ..2                                                                               |    | 21-06500-00 | Jumper                          | L=5mm                      | JP900(120V), JP901(230V), JP902(120V), JP903(120V), JP904(230V), JP905(120V), JP906(120V), JP907(230V), JP908(120V), |             | C BC:3<br>AH:6 |
| <b>FUSE</b>                                                                       |    |             |                                 |                            |                                                                                                                      |             |                |
| ..2                                                                               |    | 20-20000-01 | FUSE HOLDER                     | HF-003-1                   | F901, F902, F903                                                                                                     | FUSEHOLD    | 3              |
| ..2                                                                               |    | 20-12312-02 | FUSE                            | 3.15A                      | F902, F903                                                                                                           |             | C BC:2         |
| ..2                                                                               |    | 20-12502-00 | FUSE                            | 5A                         | F902, F903                                                                                                           |             | AH:2           |
| ..2                                                                               |    | 20-12101-00 | FUSE                            | 100mA                      | F901                                                                                                                 |             | 1              |
| <b>PCB</b>                                                                        |    |             |                                 |                            |                                                                                                                      |             |                |
| ..2                                                                               |    | 16-53007-01 | STANDBY PCB                     | FR-4, 1.6mm, 165mm×48mm    |                                                                                                                      |             | 1              |
| ..2                                                                               |    | 94-048005-0 | Warning Label                   | φ10,YELLOW                 | PCB(2)                                                                                                               |             | 2              |
| <b>.1 P/N:01-50307-02 STANDBY BOARD (BOTTOM)</b>                                  |    |             |                                 |                            |                                                                                                                      |             |                |
| <b>DIODE</b>                                                                      |    |             |                                 |                            |                                                                                                                      |             |                |
| ..2                                                                               |    | 33-30112-00 | Diode Bridge                    | DF1501S                    | B901, B902                                                                                                           | BRIDGEDF    | 2              |
| <b>ICS</b>                                                                        |    |             |                                 |                            |                                                                                                                      |             |                |
| ..2                                                                               |    | 03-01117-01 | Regulator IC                    | LM1117MP×-5.0/AMS1117-5.0  | IC1                                                                                                                  | SOT-223     | 1              |
| <b>CAPACITORS</b>                                                                 |    |             |                                 |                            |                                                                                                                      |             |                |
| ..2                                                                               |    | 26-10451-01 | Ceramic Chip Capacitor          | 0.1uF, 50V, +80%-20%       | C901, C902, C905, C906, C908                                                                                         | 0805        | 5              |
| ..2                                                                               |    | 06-10111-09 | Chip Alu Electrolytic Capacitor | 100uF, 10V, ±20%           | C907                                                                                                                 | 6.3×5.4     | 1              |
| ..2                                                                               |    | 06-22211-04 | Alu Electrolytic Capacitor      | 2200uF, 25V, ±20%          | C903, C904                                                                                                           | Pitch=7.5mm | 2              |
| <b>TRANSFORMERS</b>                                                               |    |             |                                 |                            |                                                                                                                      |             |                |
| ..2                                                                               |    | 18-53010-00 | Transformer                     | 12V, 5V R type transformer | T901                                                                                                                 |             | 1              |
| <b>CONNECTORS</b>                                                                 |    |             |                                 |                            |                                                                                                                      |             |                |
| ..2                                                                               |    | 13-22504-00 | Connector                       | 4PIN                       | CZ902                                                                                                                | SIP4A       | 1              |
| ..2                                                                               |    | 13-22504-10 | Connector                       | 4PIN                       | CZ908                                                                                                                | SIP4A       | 1              |
| <b>PCB</b>                                                                        |    |             |                                 |                            |                                                                                                                      |             |                |
| ..2                                                                               |    | 16-53007-02 | STANDBY PCB                     | FR-4, 1.6mm, 120mm×48mm    |                                                                                                                      |             | 1              |
| <b>MECHANICAL PARTS</b>                                                           |    |             |                                 |                            |                                                                                                                      |             |                |
| ..2                                                                               |    | 62-010402-0 | NUT                             | GB6170-86, M4,             |                                                                                                                      |             | 2              |
| ..2                                                                               |    | 63-010408-0 | WASHER                          | GB97.1-85 φ4               |                                                                                                                      |             | 2              |
| ..2                                                                               |    | 63-020411-0 | WASHER                          | GB93-87 φ4                 |                                                                                                                      |             | 2              |
| ..2                                                                               |    | 61-224508-1 | BOLT                            | GB/T70.1, 4×8,             |                                                                                                                      |             | 2              |
| <b>.1 P/N: 01-50308-01 SPK BOARD (L )</b>                                         |    |             |                                 |                            |                                                                                                                      |             |                |
| <b>CONNECTORS</b>                                                                 |    |             |                                 |                            |                                                                                                                      |             |                |
| ..2                                                                               |    | 13-23908-01 | M Connector                     | 3.96B-8A                   | CZS1(L)                                                                                                              |             | 1              |
| <b>PCB</b>                                                                        |    |             |                                 |                            |                                                                                                                      |             |                |
| ..2                                                                               |    | 16-53008-01 | SPK PCB                         | FR-4, 1.6mm, 45mm×60mm     |                                                                                                                      |             | 1              |
| <b>.1 P/N:01-50308-02 SPK BOARD (R )</b>                                          |    |             |                                 |                            |                                                                                                                      |             |                |
| <b>CONNECTORS</b>                                                                 |    |             |                                 |                            |                                                                                                                      |             |                |
| ..2                                                                               |    | 13-23908-01 | M Connector                     | 3.96B-8A                   | CZS2 (R )                                                                                                            |             | 1              |
| <b>PCB</b>                                                                        |    |             |                                 |                            |                                                                                                                      |             |                |
| ..2                                                                               |    | 16-53008-02 | SPK PCB                         | FR-4, 1.6mm, 45mm×60mm     |                                                                                                                      |             | 1              |

| L                 | CP                     | P/N               | Description                         | Part Type           | Designator                                                 | Footprint   | Qty |
|-------------------|------------------------|-------------------|-------------------------------------|---------------------|------------------------------------------------------------|-------------|-----|
| <b>.1</b>         | <b>P/N:01-50306-01</b> | <b>LAMP BOARD</b> |                                     |                     |                                                            |             |     |
| <b>DIODE</b>      |                        |                   |                                     |                     |                                                            |             |     |
| ..2               |                        | 33-44148-03       | Switch Diode                        | 1N4148              | D303, D304, D305, D306, D323, D325, D317, D318, D320, D321 | Pitch=10mm  | 10  |
| ..2               |                        | 33-44148-02       | Switch Diode                        | 1N4148              | D311, D312, D313, D314, D315, D326, D340                   | Pitch=7.5mm | 7   |
| ..2               |                        | 33-40021-03       | Switch Diode                        | BAV21               | D307, D308, D309                                           | Pitch=7.5mm | 3   |
| ..2               |                        | 33-13609-01       | Zener Diode                         | 3V6, 1/2W           | D322, D324                                                 | Pitch=10mm  | 2   |
| ..2               |                        | 33-11200-01       | Zener Diode                         | 12V, 1/2W           | D327                                                       | Pitch=7.5mm | 1   |
| ..2               |                        | 33-11800-01       | Zener Diode                         | 18V, 1/2W           | D301, D302                                                 | Pitch=10mm  | 2   |
| ..2               |                        | 33-50550-01       | LED                                 | GREEN               | D316, D319                                                 | Pitch=2.5mm | 2   |
| <b>TRANSISTOR</b> |                        |                   |                                     |                     |                                                            |             |     |
| ..2               |                        | 31-00872-00       | Transistor                          | 2SA872AE            | Q301, Q306, Q307                                           | TO-92       | 3   |
| ..2               |                        | 31-01775-00       | Transistor                          | 2SC1775AE           | Q302, Q303, Q304, Q330                                     | TO-92       | 4   |
| ..2               |                        | 31-00970-00       | Transistor                          | 2SA970-GR           | Q326, Q355                                                 | TO-92       | 2   |
| ..2               |                        | 31-01015-00       | Transistor                          | 2SA1015-GR          | Q305, Q309, Q316, Q350, Q354                               | TO-92       | 5   |
| ..2               |                        | 31-01815-00       | Transistor                          | 2SC1815-GR          | Q308, Q312, Q352, Q353                                     | TO-92       | 4   |
| ..2               |                        | 31-02240-00       | Transistor                          | 2SC2240-GR          | Q325, Q356                                                 | TO-92       | 2   |
| ..2               |                        | 31-02878-00       | Transistor                          | 2SC2878A            | Q329                                                       | TO-92       | 1   |
| ..2               |                        | 31-01360-00       | Transistor                          | 2SA1360             | Q310, Q332                                                 | TO-126MOD   | 2   |
| ..2               |                        | 31-03423-00       | Transistor                          | 2SC3423             | Q311, Q331                                                 | TO-126MOD   | 2   |
| ..2               |                        | 31-01837-00       | Transistor                          | 2SA1837             | Q313, Q318, Q338                                           | TO-220      | 3   |
| ..2               |                        | 31-04793-00       | Transistor                          | 2SC4793             | Q314, Q317, Q337                                           | TO-220      | 3   |
| ..2               |                        | 31-02690-00       | Transistor                          | KSC2690             | Q315                                                       | TO-126      | 1   |
| ..2               |                        | 31-01943-00       | Transistor                          | 2SA1943-O           | Q319, Q321, Q323, Q327                                     | 2-21F1A     | 4   |
| ..2               |                        | 31-05200-00       | Transistor                          | 2SC5200-O           | Q320, Q322, Q324, Q328                                     | 2-21F1A     | 4   |
| <b>ICS</b>        |                        |                   |                                     |                     |                                                            |             |     |
| ..2               |                        | 03-00431-00       | Regulator                           | TL431/AE431/KA431   | IC301, IC302, IC305                                        | TO-92       | 3   |
| ..2               |                        | 03-00082-00       | Dual OP-AMP                         | TL082CP/CN/D        | IC303                                                      | DIP8        | 1   |
| ..2               |                        | 03-01237-00       | Protection IC                       | uPC1237HA           | IC304                                                      | SIP8-IC     | 1   |
| <b>CAPACITOR</b>  |                        |                   |                                     |                     |                                                            |             |     |
| ..2               |                        | 05-33022-00       | Ceramic Disc Capacitor              | 33pF, 250V, ±10%    | C305, C307                                                 | Pitch=5mm   | 2   |
| ..2               |                        | 05-33151-01       | Ceramic Disc Capacitor              | 330pF, 50V, ±10%    | C308                                                       | Pitch=5mm   | 1   |
| ..2               |                        | 05-47112-00       | Ceramic Disc Capacitor              | 470pF, 100V, ±10%   | C325, C326                                                 | Pitch=5mm   | 2   |
| ..2               |                        | 24-22461-00       | Monolithic Capacitor                | 0.22uF, 63V, ±20%   | C332                                                       | Pitch=5mm   | 1   |
| ..2               |                        | 25-10261-00       | Metallized Polyester Film Capacitor | 1nF, 63V, ±5%       | C302                                                       | Pitch=5mm   | 1   |
| ..2               |                        | 25-22361-05       | Metallized Polyester Film Capacitor | 22nF, 63V, ±5%      | C320                                                       | Pitch=5mm   | 1   |
| ..2               |                        | 25-22361-05       | Metallized Polyester Film Capacitor | 22nF, 63V, ±5%      | C340                                                       | Pitch=5mm   | 1   |
| ..2               |                        | 25-10412-10       | Metallized Polyester Film Capacitor | 0.1uF, 100V, ±10%   | C316, C317, C322, C323                                     | Pitch=7.5mm | 4   |
| ..2               |                        | 25-10412-11       | Metallized Polyester Film Capacitor | 0.1uF, 100V, ±5%    | C318                                                       | Pitch=7.5mm | 1   |
| ..2               |                        | 25-10412-04       | Metallized Polyester Film Capacitor | 0.1uF, 100V, ±5%    | C301, C306, C309, C310, C328 C314,                         | Pitch=5mm   | 6   |
| ..2               |                        | 25-10561-02       | Metallized Polyester Film Capacitor | 1uF, 63V, ±5%       | C327, C329                                                 | Pitch=5mm   | 2   |
| ..2               |                        | 06-22951-05       | Alu Electrolytic Capacitor          | 2.2uF, 50V, ±20%    | C334, C335                                                 | Pitch=5mm   | 2   |
| ..2               |                        | 06-47951-05       | Alu Electrolytic Capacitor          | 4.7uF, 50V, ±20%    | C321                                                       | Pitch=5mm   | 1   |
| ..2               |                        | 06-10051-01       | Alu Electrolytic Capacitor          | 10uF, 50V, ±20%     | C303, C304, C315, C319                                     | Pitch=5mm   | 4   |
| ..2               |                        | 06-47061-02       | Alu Electrolytic Capacitor          | 47uF, 63V, ±20%     | C333                                                       | Pitch=3.5mm | 1   |
| ..2               |                        | 06-10151-02       | Alu Electrolytic Capacitor          | 100uF, 50V, ±20%    | C311, C312                                                 | Pitch=3.5mm | 2   |
| ..2               |                        | 06-33111-03       | Alu Electrolytic Capacitor          | 330uF, 16V, ±20%    | C331                                                       | Pitch=3.5mm | 1   |
| <b>RESISTOR</b>   |                        |                   |                                     |                     |                                                            |             |     |
| ..2               |                        | 21-06750-00       | Link                                | L=7.5mm             | R392, R393                                                 | Pitch=7.5mm | 2   |
| ..2               |                        | 07-10109-10       | Carbon Film Resistor                | 1Ω, 1/4W, ±5%       | R388, R389, R390, R391                                     | Pitch=10mm  | 4   |
| ..2               |                        | 07-10220-10       | Carbon Film Resistor                | 22Ω, 1/4W, ±5%      | R351                                                       | Pitch=10mm  | 1   |
| ..2               |                        | 07-10201-01       | Carbon Film Resistor                | 200 Ω, 1/6W, ±5%    | R375                                                       | Pitch=7.5mm | 1   |
| ..2               |                        | 07-10222-01       | Carbon Film Resistor                | 2K2Ω, 1/6W, ±5%     | R368                                                       | Pitch=7.5mm | 1   |
| ..2               |                        | 07-10332-01       | Carbon Film Resistor                | 3K3Ω, 1/6W, ±5%     | R374                                                       | Pitch=7.5mm | 1   |
| ..2               |                        | 07-10472-01       | Carbon Film Resistor                | 4K7Ω, 1/6W, ±5%     | R36                                                        | Pitch=7.5mm | 1   |
| ..2               |                        | 07-10682-01       | Carbon Film Resistor                | 6K8 Ω, 1/6W, ±5%    | R364                                                       | Pitch=7.5mm | 1   |
| ..2               |                        | 07-10682-01       | Carbon Film Resistor                | 6K8Ω, 1/6W, ±5%     | R370                                                       | Pitch=7.5mm | 1   |
| ..2               |                        | 07-10103-10       | Carbon Film Resistor                | 10K Ω, 1/4W, ±5%    | R311, R315, R333, R335, R342, R343, R378, R379, R394(N.I.) | Pitch=10mm  | 8   |
| ..2               |                        | 07-10103-01       | Carbon Film Resistor                | 10KΩ, 1/6W, ±5%(NI) | R365, R372(N.I.), R398                                     | Pitch=7.5mm | 2   |
| ..2               |                        | 07-10223-10       | Carbon Film Resistor                | 22K Ω, 1/4W, ±5%    | R302, R310, R316                                           | Pitch=10mm  | 3   |
| ..2               |                        | 07-10223-01       | Carbon Film Resistor                | 22K Ω, 1/6W, ±5%    | R363                                                       | Pitch=7.5mm | 1   |
| ..2               |                        | 07-10563-01       | Carbon Film Resistor                | 56KΩ, 1/6W, ±5%     | R362, R369, R371                                           | Pitch=7.5mm | 3   |
| ..2               |                        | 07-10204-01       | Carbon Film Resistor                | 200KΩ, 1/6W, ±5%    | R35                                                        | Pitch=7.5mm | 1   |
| ..2               |                        | 07-20000-10       | Metal Film Resistor                 | 0 Ω, 1/4W, ±5%      | J301                                                       | Pitch=10mm  | 1   |
| ..2               |                        | 07-21009-10       | Metal Film Resistor                 | 10Ω, 1/4W, ±1%      | R33, R34                                                   | Pitch=10mm  | 2   |
| ..2               |                        | 07-20150-60       | Metal Film Resistor                 | 15Ω, 0.6W, ±5%      | R348, R349                                                 | Pitch=10mm  | 2   |

| L                | CP                          | P/N         | Description            | Part Type                       | Designator                                              | Footprint    | Qty |
|------------------|-----------------------------|-------------|------------------------|---------------------------------|---------------------------------------------------------|--------------|-----|
| ..2              |                             | 07-20180-60 | Metal Film Resistor    | 18Ω, 0.6W, ±5%                  | R337, R329                                              | Pitch=10mm   | 2   |
| ..2              |                             | 07-22109-10 | Metal Film Resistor    | 21Ω, 1/4W, ±1%                  | R317                                                    | Pitch=10mm   | 1   |
| ..2              |                             | 07-20330-10 | Metal Film Resistor    | 33Ω, 1/4W, ±5%                  | R308, R320                                              | Pitch=10mm   | 2   |
| ..2              |                             | 07-20820-10 | Metal Film Resistor    | 82Ω, 1/4W, ±5%                  | R307, R377                                              | Pitch=10mm   | 2   |
| ..2              |                             | 07-20101-10 | Metal Film Resistor    | 100Ω, 1/4W, ±5%                 | R303, R304, R306, R312, R314, R318                      | Pitch=10mm   | 6   |
| ..2              |                             | 07-20221-10 | Metal Film Resistor    | 220Ω, 1/4W, ±5%                 | R347                                                    | Pitch=10mm   | 1   |
| ..2              |                             | 07-20301-10 | Metal Film Resistor    | 300Ω, 1/4W, ±5%                 | R328                                                    | Pitch=10mm   | 1   |
| ..2              |                             | 07-20471-10 | Metal Film Resistor    | 470Ω, 1/4W, ±5%                 | R301                                                    | Pitch=10mm   | 1   |
| ..2              |                             | 07-20681-10 | Metal Film Resistor    | 680Ω, 1/4W, ±5%                 | R353                                                    | Pitch=10mm   | 1   |
| ..2              |                             | 07-20102-10 | Metal Film Resistor    | 1K Ω, 1/4W, ±5%                 | R31                                                     | Pitch=10mm   | 1   |
| ..2              |                             | 07-21001-10 | Metal Film Resistor    | 1K Ω, 1/4W, ±1%                 | R346                                                    | Pitch=10mm   | 1   |
| ..2              |                             | 07-20102-02 | Metal Film Resistor    | 1K Ω, 1/6W, ±5%                 | R361, R3A6                                              | Pitch=7.5mm  | 2   |
| ..2              |                             | 07-20122-10 | Metal Film Resistor    | 1K2Ω, 1/4W, ±5%                 | R32                                                     | Pitch=10mm   | 1   |
| ..2              |                             | 07-21201-10 | Metal Film Resistor    | 1K2 Ω, 1/4W, ±1%                | R345                                                    | Pitch=10mm   | 1   |
| ..2              |                             | 07-20202-01 | Metal Film Resistor    | 2K, 1/6W, ±5%                   | R3A1, R3A3                                              | Pitch=7.5mm  | 2   |
| ..2              |                             | 07-20222-01 | Metal Film Resistor    | 2.2K, 1/6W, ±5%                 | R3A2                                                    | Pitch=7.5mm  | 1   |
| ..2              |                             | 07-26341-01 | Metal Film Resistor    | 6K34 Ω, 1/6W, ±1%               | R3A5                                                    | Pitch=7.5mm  | 1   |
| ..2              |                             | 07-20103-60 | Metal Film Resistor    | 10KΩ, 0.6W, ±5%                 | R355, R358                                              | Pitch=10mm   | 2   |
| ..2              |                             | 07-20103-01 | Metal Film Resistor    | 10K Ω, 1/6W, ±5%                | R3A4                                                    | Pitch=7.5mm  | 1   |
| ..2              |                             | 07-21742-01 | Metal Film Resistor    | 17K4, 1/6W, ±1%                 | R3A7                                                    | Pitch=7.5mm  | 1   |
| ..2              |                             | 07-22002-10 | Metal Film Resistor    | 20K, 1/4W, 1%                   | R327                                                    | Pitch=10mm   | 1   |
| ..2              |                             | 07-20273-10 | Metal Film Resistor    | 27KΩ, 1/4W, ±5%                 | R305, R313                                              | Pitch=10mm   | 2   |
| ..2              |                             | 07-20393-10 | Metal Film Resistor    | 39KΩ, 1/4W, ±5%                 | R321, R325                                              | Pitch=10mm   | 2   |
| ..2              |                             | 07-20104-01 | Metal Film Resistor    | 100KΩ, 1/6W, ±5%                | R373                                                    | Pitch=7.5mm  | 1   |
| ..2              |                             | 07-20104-10 | Metal Film Resistor    | 100KΩ, 1/4W, ±5%                | R324, R326                                              | Pitch=10mm   | 2   |
| ..2              |                             | 07-20104-01 | Metal Film Resistor    | 100K Ω, 1/6W, ±5%               | R366, R397                                              | Pitch=7.5mm  | 2   |
| ..2              |                             | 07-20204-10 | Metal Film Resistor    | 200KΩ, 1/4W, ±5%                | R37                                                     | Pitch=10mm   | 1   |
| ..2              |                             | 07-20224-10 | Metal Film Resistor    | 220KΩ, 1/4W, ±5%                | R350, R376                                              | Pitch=10mm   | 2   |
| ..2              |                             | 07-20105-10 | Metal Film Resistor    | 1MΩ, 1/4W, ±5%                  | R352, R354                                              | Pitch=10mm   | 2   |
| ..2              |                             | 07-30108-10 | Oxidized Film Resistor | 0.1Ω, 1W, ±5%                   | R3B1, R3B2, R3B3, R3B4, R3B5, R3B6, R3B7, R3B8          | Pitch=15mm   | 8   |
| ..2              |                             | 07-30229-10 | Oxidized Film Resistor | 2R2, 1/4W, ±5%                  | R380, R381, R382, R383, R384, R385, R386, R387          | Pitch=10mm   | 8   |
| ..2              |                             | 07-30339-12 | Oxidized Film Resistor | 3R3Ω, 1/2W, ±5%                 | R330, R338                                              | Pitch=10mm   | 2   |
| ..2              |                             | 07-30820-00 | Oxidized Film Resistor | 82Ω, 1/2W, ±5%                  | R309, R323                                              | Pitch=10mm   | 2   |
| ..2              |                             | 07-30331-11 | Oxidized Film Resistor | 330Ω, 1/2W, ±5%                 | R332, R341                                              | Pitch=10mm   | 2   |
| ..2              |                             | 07-30339-11 | Oxidized Film Resistor | 3.3 Ω, 1W, ±5%                  | R399                                                    | Pitch=12.5mm | 1   |
| ..2              |                             | 07-31201-03 | Oxidized Film Resistor | 1K2, 3W, ±2% TCR=100            | R319, R322                                              | Pitch=20mm   | 2   |
| ..2              |                             | 07-30472-04 | Oxidized Film Resistor | 4K7Ω, 3W, ±5%                   | R334, R344, R395, R396                                  | Pitch=20mm   | 4   |
| ..2              |                             | 07-30229-02 | Oxidized Film Resistor | 2.2 Ω, 2W, ±5%                  | R359                                                    | Pitch=15mm   | 1   |
| ..2              |                             | 07-40507-05 | Ceramic Resistor       | 0.05Ω, 5W, ±10%                 | R356, R357                                              | Pitch=10mm   | 2   |
| ..2              |                             | 07-50479-02 | Fusible Resistor       | 4R7Ω, 1/2W, ±5%                 | R331, R339                                              | Pitch=12.5mm | 2   |
| ..2              |                             | 07-70471-08 | Posistor               | T=80 C degree                   | RT301                                                   | Pitch=5mm    | 1   |
| ..2              |                             | 07-70022-09 | Thermal Breaker        | T=90 C degree                   | B301                                                    | Pitch=5mm    | 1   |
| INDUCTORS        |                             |             |                        |                                 |                                                         |              |     |
| ..2              |                             | 08-01010-00 | Inductor               | 1uH, 10%                        | L302                                                    | Pitch=12.5mm | 1   |
| ..2              |                             | 08-01101-01 | Inductor               | 100uH, 20%                      | L301                                                    | Pitch=5mm    | 1   |
| POTS             |                             |             |                        |                                 |                                                         |              |     |
| ..2              |                             | 09-02201-01 | Semi-POT               | 200Ω                            | VR301                                                   | VR           | 1   |
| RELAY            |                             |             |                        |                                 |                                                         |              |     |
| ..2              |                             | 12-03101-03 | Relay                  | 24V                             | RL301, RL302                                            | JDF&TH1A     | 2   |
| CONNECTOR        |                             |             |                        |                                 |                                                         |              |     |
| ..2              |                             | 13-12502-00 | Test Pin               | 2pin 2.54                       | TP301                                                   |              | 1   |
| ..2              |                             | 13-22502-00 | Connector              | 2PIN                            | CZ301                                                   | SIP2/S=2.5mm | 1   |
| ..2              |                             | 13-21210-00 | Connector              | 10PIN                           | CZ302                                                   | CB10/S=2.5mm | 1   |
| ..2              |                             | 13-13908-01 | Connector              | 3.96 8PIN                       | CZ303                                                   | POWZ8        | 1   |
| ..2              |                             | 76-050001-0 | Teflon                 | 15mm 24AWG                      | RT301                                                   |              | 2   |
| ..2              |                             | 76-048001-0 | Teflon                 | 12mm 24AWG                      | B301                                                    |              | 2   |
| PCB 线路板          |                             |             |                        |                                 |                                                         |              |     |
| ..2              |                             | 16-53006-11 | L CHANNEL PCB          | VM2.0, FR-4, 1.6mm, 320mm×80mm  |                                                         |              | 1   |
| ...3             |                             | 16-53060-10 | PCB                    | VM2.0, FR-4, 1.6mm, 333mm×177mm |                                                         |              | 1/2 |
| MECHANICAL PARTS |                             |             |                        |                                 |                                                         |              |     |
| ..2              |                             | 62-050302-0 | PEM NUT-PCB            | M3×0.5, KFEB, copper made       | P301, P302, P303, P304                                  |              | 4   |
| ..2              |                             | 70-048004-0 | Small Heatsink         | 6063, T5                        |                                                         |              | 1   |
| ..2              |                             | 70-048005-0 | Small Heatsink B       | 6063, T5                        |                                                         |              | 1   |
| ..2              |                             | 61-023206-0 | Self Taping Screws     | BTB3×6                          | little heatsink(2), little heatsink B(2), Transistor(6) |              | 10  |
| ..2              |                             | 61-023208-0 | Self Taping Screws     | BTB3×8                          | Transistor(5)                                           |              | 5   |
| ..2              |                             | 69-048029-0 | Busbar C               | T2Y2, 0.1μm gold plated         |                                                         |              | 2   |
| .1               | P/N: 01-50306-02 RAMP BOARD |             |                        |                                 |                                                         |              |     |
| DIODE            |                             |             |                        |                                 |                                                         |              |     |

| L                 | CP | P/N         | Description                         | Part Type               | Designator                                                             | Footprint   | Qty |
|-------------------|----|-------------|-------------------------------------|-------------------------|------------------------------------------------------------------------|-------------|-----|
| ..2               |    | 33-44148-02 | Switch Diode                        | 1N4148                  | D411, D414, D415, D426, D440                                           | Pitch=7.5mm | 5   |
| ..2               |    | 33-44148-03 | Switch Diode                        | 1N4148                  | D403, D404, D405, D406, D412, D413, D417, D418, D420, D421, D423, D425 | Pitch=10mm  | 12  |
| ..2               |    | 33-40021-03 | Switch Diode                        | BAV21                   | D407, D408, D409                                                       | Pitch=7.5mm | 3   |
| ..2               |    | 33-13609-01 | Zener Diode                         | 3V6, 1/2W               | D424, D422                                                             | Pitch=10mm  | 2   |
| ..2               |    | 33-11200-01 | Zener Diode                         | 12V, 1/2W               | D427                                                                   | Pitch=7.5mm | 1   |
| ..2               |    | 33-11800-01 | Zener Diode                         | 18V, 1/2W               | D401, D402                                                             | Pitch=10mm  | 2   |
| ..2               |    | 33-50550-01 | LED                                 | GREEN LED               | D416, D419                                                             | Pitch=2.5mm | 2   |
|                   |    |             |                                     |                         |                                                                        |             |     |
| <b>TRANSISTOR</b> |    |             |                                     |                         |                                                                        |             |     |
| ..2               |    | 31-00872-00 | Transistor                          | 2SA872AE                | Q401, Q406, Q407                                                       | TO-92       | 3   |
| ..2               |    | 31-01775-00 | Transistor                          | 2SC1775AE               | Q402, Q403, Q404, Q430                                                 | TO-92       | 4   |
| ..2               |    | 31-00970-00 | Transistor                          | 2SA970                  | Q426, Q455                                                             | TO-92       | 2   |
| ..2               |    | 31-01015-00 | Transistor                          | 2SA1015                 | Q405, Q409, Q416, Q450, Q454                                           | TO-92       | 5   |
| ..2               |    | 31-01815-00 | Transistor                          | 2SC1815-GR              | Q408, Q412, Q452, Q453                                                 | TO-92       | 4   |
| ..2               |    | 31-02240-00 | Transistor                          | 2SC2240-GR              | Q425, Q456                                                             | TO-92       | 2   |
| ..2               |    | 31-02878-00 | Transistor                          | 2SC2878A                | Q429                                                                   | TO-92       | 1   |
| ..2               |    | 31-01360-00 | Transistor                          | 2SA1360                 | Q410, Q432                                                             | TO-126MOD   | 2   |
| ..2               |    | 31-03423-00 | Transistor                          | 2SC3423                 | Q411, Q431                                                             | TO-126MOD   | 2   |
| ..2               |    | 31-01837-00 | Transistor                          | 2SA1837                 | Q418, Q438, Q413                                                       | TO-220      | 3   |
| ..2               |    | 31-04793-00 | Transistor                          | 2SC4793                 | Q417, Q437, Q414                                                       | TO-220      | 3   |
| ..2               |    | 31-02690-00 | Transistor                          | KSC2690                 | Q415                                                                   | TO-126      | 1   |
| ..2               |    | 31-01943-00 | Transistor                          | 2SA1943-O               | Q419, Q421, Q423, Q427                                                 | 2-21F1A     | 4   |
| ..2               |    | 31-05200-00 | Transistor                          | 2SC5200-O               | Q420, Q422, Q424, Q428                                                 | 2-21F1A     | 4   |
|                   |    |             |                                     |                         |                                                                        |             |     |
| <b>ICS</b>        |    |             |                                     |                         |                                                                        |             |     |
| ..2               |    | 03-00431-00 | Regulator                           | TL431/AE431/KA431       | IC401, IC402, IC405                                                    | TO-92       | 3   |
| ..2               |    | 03-00082-00 | Dual OP-AMP                         | TL082CP/CN/D            | IC403                                                                  | DIP8        | 1   |
| ..2               |    | 03-01237-00 | Protection IC                       | uPC1237HA               | IC404                                                                  | SIP8-IC     | 1   |
|                   |    |             |                                     |                         |                                                                        |             |     |
| <b>CAPACITOR</b>  |    |             |                                     |                         |                                                                        |             |     |
| ..2               |    | 05-33022-00 | Ceramic Disc Capacitor              | 33pF, 250V, ±10%        | C405, C407                                                             | Pitch=5mm   | 2   |
| ..2               |    | 05-33151-01 | Ceramic Disc Capacitor              | 330pF, 50V, ±10%        | C408                                                                   | Pitch=5mm   | 1   |
| ..2               |    | 05-47112-00 | Ceramic Disc Capacitor              | 470pF, 100V, ±10%       | C425, C426                                                             | Pitch=5mm   | 2   |
| ..2               |    | 24-22461-00 | Capacitor                           | 0.22uF, 63V, +80%, -20% | C432                                                                   | Pitch=5mm   | 1   |
| ..2               |    | 25-10261-00 | Metallized Polyester Film Capacitor | 1nF, 63V, ±5%           | C402                                                                   | Pitch=5mm   | 1   |
| ..2               |    | 25-22361-05 | Metallized Polyester Film Capacitor | 22nF, 63V, ±5%          | C420, C440                                                             | Pitch=5mm   | 2   |
| ..2               |    | 25-10412-04 | Metallized Polyester Film Capacitor | 0.1uF, 100V, ±5%        | C401, C406, C409, C410, C428, C414                                     | Pitch=5mm   | 6   |
| ..2               |    | 25-10412-11 | Metallized Polyester Film Capacitor | 0.1uF, 100V, ±5%        | C418                                                                   | Pitch=7.5mm | 1   |
| ..2               |    | 25-10412-10 | Metallized Polyester Film Capacitor | 0.1uF, 100V, ±10%       | C422, C423, C416, C417                                                 | Pitch=7.5mm | 4   |
| ..2               |    | 25-10561-02 | Metallized Polyester Film Capacitor | 1uF, 63V, ±5%           | C427, C429                                                             | Pitch=5mm   | 2   |
| ..2               |    | 06-22951-05 | Alu Electrolytic Capacitor          | 2.2uF, 50V, ±20%        | C434, C435                                                             | Pitch=5mm   | 2   |
| ..2               |    | 06-47951-05 | Alu Electrolytic Capacitor          | 4.7uF, 50V, ±20%        | C421                                                                   | Pitch=5mm   | 1   |
| ..2               |    | 06-10051-01 | Alu Electrolytic Capacitor          | 10uF, 50V, ±20%         | C403, C404, C415, C419                                                 | Pitch=5mm   | 4   |
| ..2               |    | 06-47061-02 | Alu Electrolytic Capacitor          | 47uF, 63V, ±20%         | C433                                                                   | Pitch=3.5mm | 1   |
| ..2               |    | 06-10151-02 | Alu Electrolytic Capacitor          | 100uF, 50V, ±20%        | C411, C412                                                             | Pitch=3.5mm | 2   |
| ..2               |    | 06-33111-03 | Alu Electrolytic Capacitor          | 330uF, 16V, ±20%        | C431                                                                   | Pitch=3.5mm | 1   |
|                   |    |             |                                     |                         |                                                                        |             |     |
| <b>RESISTOR</b>   |    |             |                                     |                         |                                                                        |             |     |
| ..2               |    | 21-06750-00 | Link                                | L=7.5mm                 | R492, R493                                                             | Pitch=7.5mm | 2   |
| ..2               |    | 07-10109-10 | Carbon Film Resistor                | 1Ω, 1/4W, ±5%           | R488, R489, R490, R491                                                 | Pitch=10mm  | 4   |
| ..2               |    | 07-10220-10 | Carbon Film Resistor                | 22Ω, 1/4W, ±5%          | R451                                                                   | Pitch=10mm  | 1   |
| ..2               |    | 07-10201-01 | Carbon Film Resistor                | 200 Ω, 1/6W, ±5%        | R475                                                                   | Pitch=7.5mm | 1   |
| ..2               |    | 07-10222-01 | Carbon Film Resistor                | 2.2K, 1/6W, ±5%         | R468                                                                   | Pitch=7.5mm | 1   |
| ..2               |    | 07-10332-01 | Carbon Film Resistor                | 3.3K, 1/6W, ±5%         | R474                                                                   | Pitch=7.5mm | 1   |
| ..2               |    | 07-10472-01 | Carbon Film Resistor                | 4K7, 1/6W, ±5%          | R46                                                                    | Pitch=7.5mm | 1   |
| ..2               |    | 07-10682-01 | Carbon Film Resistor                | 6.8K, 1/6W, ±5%         | R470                                                                   | Pitch=7.5mm | 1   |
| ..2               |    | 07-10682-01 | Carbon Film Resistor                | 6K8, 1/6W, ±5%          | R464                                                                   | Pitch=7.5mm | 1   |
| ..2               |    | 07-10103-01 | Carbon Film Resistor                | 10K, 1/6W, ±5%(NI)      | R467, R472(N.I.), R498                                                 | Pitch=7.5mm | 2   |
| ..2               |    | 07-10103-10 | Carbon Film Resistor                | 10K, 1/4W, ±5%          | R411, R415, R433, R435, R442, R443, R478, R479, R494(N.I.)             | Pitch=10mm  | 8   |
| ..2               |    | 07-10223-10 | Carbon Film Resistor                | 22K, 1/4W, ±5%          | R402, R410, R416                                                       | Pitch=10mm  | 3   |
| ..2               |    | 07-10223-01 | Carbon Film Resistor                | 22K, 1/6W, ±5%          | R463                                                                   | Pitch=7.5mm | 1   |
| ..2               |    | 07-10563-01 | Carbon Film Resistor                | 56K, 1/6W, ±5%          | R462, R471, R469                                                       | Pitch=7.5mm | 3   |
| ..2               |    | 07-10204-01 | Carbon Film Resistor                | 200K, 1/6W, ±5%         | R45                                                                    | Pitch=7.5mm | 1   |
| ..2               |    | 07-20000-10 | Metal Film Resistor                 | 0 Ω, 1/4W, ±5%          | J401, J402                                                             | Pitch=10mm  | 2   |
| ..2               |    | 07-21009-10 | Metal Film Resistor                 | 10 Ω, 1/4W, ±1%         | R43, R44                                                               | Pitch=10mm  | 2   |
| ..2               |    | 07-20150-60 | Metal Film Resistor                 | 15Ω, 0.6W, ±5%          | R448, R449                                                             | Pitch=10mm  | 2   |
| ..2               |    | 07-20180-60 | Metal Film Resistor                 | 18Ω, 0.6W, ±5%          | R437, R429                                                             | Pitch=10mm  | 2   |
| ..2               |    | 07-22109-10 | Metal Film Resistor                 | 21Ω, 1/4W, ±1%          | R417                                                                   | Pitch=10mm  | 1   |
| ..2               |    | 07-20330-10 | Metal Film Resistor                 | 33Ω, 1/4W, ±5%          | R408, R420                                                             | Pitch=10mm  | 2   |
| ..2               |    | 07-20820-10 | Metal Film Resistor                 | 82Ω, 1/4W, ±5%          | R407, R477                                                             | Pitch=10mm  | 2   |
| ..2               |    | 07-20101-10 | Metal Film Resistor                 | 100Ω, 1/4W, ±5%         | R403, R404, R406, R412, R414, R418                                     | Pitch=10mm  | 6   |
| ..2               |    | 07-20221-10 | Metal Film Resistor                 | 220Ω, 1/4W, ±5%         | R447                                                                   | Pitch=10mm  | 1   |

| L                       | CP | P/N              | Description            | Part Type                       | Designator                                                                       | Footprint     | Qty |
|-------------------------|----|------------------|------------------------|---------------------------------|----------------------------------------------------------------------------------|---------------|-----|
| ..2                     |    | 07-20301-10      | Metal Film Resistor    | 300Ω, 1/4W, ±5%                 | R428                                                                             | Pitch=10mm    | 1   |
| ..2                     |    | 07-20471-10      | Metal Film Resistor    | 470Ω, 1/4W, ±5%                 | R401                                                                             | Pitch=10mm    | 1   |
| ..2                     |    | 07-20681-10      | Metal Film Resistor    | 680Ω, 1/4W, ±5%                 | R453                                                                             | Pitch=10mm    | 1   |
| ..2                     |    | 07-20102-10      | Metal Film Resistor    | 1K, 1/4W, ±5%                   | R41                                                                              | Pitch=10mm    | 1   |
| ..2                     |    | 07-21001-10      | Metal Film Resistor    | 1K, 1/4W, ±1%                   | R446                                                                             | Pitch=10mm    | 1   |
| ..2                     |    | 07-20102-02      | Metal Film Resistor    | 1K, 1/6W, ±5%                   | R461, R4A6                                                                       | Pitch=7.5mm   | 2   |
| ..2                     |    | 07-20122-10      | Metal Film Resistor    | 1K2, 1/4W, ±5%                  | R42                                                                              | Pitch=10mm    | 1   |
| ..2                     |    | 07-21201-10      | Metal Film Resistor    | 1K2, 1/4W, ±1%                  | R445                                                                             | Pitch=10mm    | 1   |
| ..2                     |    | 07-20202-01      | Metal Film Resistor    | 2K, 1/6W, ±5%                   | R4A1, R4A3                                                                       | Pitch=7.5mm   | 2   |
| ..2                     |    | 07-20222-01      | Metal Film Resistor    | 2.2K, 1/6W, ±5%                 | R4A2                                                                             | Pitch=7.5mm   | 1   |
| ..2                     |    | 07-26341-01      | Metal Film Resistor    | 6K34 Ω, 1/6W, ±1%               | R4A5                                                                             | Pitch=7.5mm   | 1   |
| ..2                     |    | 07-20103-60      | Metal Film Resistor    | 10KΩ, 0.6W, ±5%                 | R455, R458                                                                       | Pitch=10mm    | 2   |
| ..2                     |    | 07-20103-01      | Metal Film Resistor    | 10K Ω, 1/6W, ±5%                | R4A4                                                                             | Pitch=7.5mm   | 1   |
| ..2                     |    | 07-21742-01      | Metal Film Resistor    | 17K4, 1/6W, ±1%                 | R4A7                                                                             | Pitch=7.5mm   | 1   |
| ..2                     |    | 07-22002-10      | Metal Film Resistor    | 20K, 1/4W, ±1%                  | R427                                                                             | Pitch=10mm    | 1   |
| ..2                     |    | 07-20273-10      | Metal Film Resistor    | 27K, 1/4W, ±5%                  | R405, R413                                                                       | Pitch=10mm    | 2   |
| ..2                     |    | 07-20393-10      | Metal Film Resistor    | 39K, 1/4W, ±5%                  | R421, R425                                                                       | Pitch=10mm    | 2   |
| ..2                     |    | 07-20104-01      | Metal Film Resistor    | 100K, 1/6W, ±5%                 | R473                                                                             | Pitch=7.5mm   | 1   |
| ..2                     |    | 07-20104-10      | Metal Film Resistor    | 100K, 1/4W, ±5%                 | R424, R426                                                                       | Pitch=10mm    | 2   |
| ..2                     |    | 07-20104-01      | Metal Film Resistor    | 100K, 1/6W, ±5%                 | R466, R497                                                                       | Pitch=7.5mm   | 2   |
| ..2                     |    | 07-20204-01      | Metal Film Resistor    | 200K, 1/6W, ±5%                 | R47                                                                              | Pitch=7.5mm   | 1   |
| ..2                     |    | 07-20224-10      | Metal Film Resistor    | 220K, 1/4W, ±5%                 | R450, R476                                                                       | Pitch=10mm    | 2   |
| ..2                     |    | 07-20105-10      | Metal Film Resistor    | 1M, 1/4W, ±5%                   | R452, R454                                                                       | Pitch=10mm    | 2   |
| ..2                     |    | 07-30108-10      | Oxidized Film Resistor | 0.1Ω, 1W, ±5%                   | R4B1, R4B2, R4B3, R4B4, R4B5, R4B6, R4B7, R4B8                                   | Pitch=15mm    | 8   |
| ..2                     |    | 07-30229-10      | Resistor               | 2R2, 1/4W, ±5%                  | R480, R481, R482, R483, R484, R485, R486, R487                                   | Pitch=10mm    | 8   |
| ..2                     |    | 07-30339-12      | Oxidized Film Resistor | 3R3Ω, 1/2W, ±5%                 | R430, R438                                                                       | Pitch=10mm    | 2   |
| ..2                     |    | 07-30820-00      | Oxidized Film Resistor | 82Ω, 1/2W, ±5%                  | R409, R423                                                                       | Pitch=10mm    | 2   |
| ..2                     |    | 07-30331-11      | Oxidized Film Resistor | 330Ω, 1/2W, ±5%                 | R432, R441                                                                       | Pitch=10mm    | 2   |
| ..2                     |    | 07-30339-11      | Oxidized Film Resistor | 3.3 Ω, 1W, ±5%                  | R499                                                                             | Pitch=12.5mm  | 1   |
| ..2                     |    | 07-31201-03      | Oxidized Film Resistor | 1K2, 3W, ±2% TCR=100            | R419, R422                                                                       | Pitch=20mm    | 2   |
| ..2                     |    | 07-30472-04      | Oxidized Film Resistor | 4K7Ω, 3W, ±5%                   | R434, R444, R495, R496                                                           | Pitch=20mm    | 4   |
| ..2                     |    | 07-30229-02      | Oxidized Film Resistor | 2.2 Ω, 2W, ±5%                  | R459                                                                             | Pitch=15mm    | 1   |
| ..2                     |    | 07-40507-05      | Ceramic Resistor       | 0.05Ω, 5W, ±10%                 | R456, R457                                                                       | Pitch=10mm    | 2   |
| ..2                     |    | 07-50479-02      | Fusible                | 4R7Ω, 1/2W, ±5%                 | R431, R439                                                                       | Pitch=12.5mm  | 2   |
| ..2                     |    | 07-70471-08      | Posistor               | T=80 C degree                   | RT401                                                                            | Pitch=5mm     | 1   |
| ..2                     |    | 07-70022-09      | Thermal Breaker        | TO=90 C degree                  | B401                                                                             | Pitch=5mm     | 1   |
| <b>INDUCTORS</b>        |    |                  |                        |                                 |                                                                                  |               |     |
| ..2                     |    | 08-01010-00      | Inductor               | 1uH, 10%                        | L402                                                                             | Pitch=12.5mm  | 1   |
| ..2                     |    | 08-01101-01      | Inductor               | 100uH, 20%                      | L401                                                                             | Pitch=5mm     | 1   |
| <b>POTS</b>             |    |                  |                        |                                 |                                                                                  |               |     |
| ..2                     |    | 09-02201-01      | Semi-POT               | 200 Ω                           | VR401                                                                            | VR            | 1   |
| <b>RELAY</b>            |    |                  |                        |                                 |                                                                                  |               |     |
| ..2                     |    | 12-03101-03      | Relay                  | 24V                             | RL401, RL402                                                                     |               | 2   |
| <b>CONNECTOR</b>        |    |                  |                        |                                 |                                                                                  |               |     |
| ..2                     |    | 13-12502-00      | Test Pin               | 2pin 2.54                       | TP401                                                                            |               | 1   |
| ..2                     |    | 13-22502-00      | Connector              | 2PIN                            | CZ401                                                                            | S=2.5mm       | 1   |
| ..2                     |    | 13-21210-00      | Connector              | 10PIN                           | CZ402                                                                            | CB10/S=1.25mm | 1   |
| ..2                     |    | 13-13908-01      | Connector              | 3.96 8PIN, gold plated          | CZ403                                                                            |               | 1   |
| ..2                     |    | 76-050001-0      | Teflon                 | 15mm 24AWG                      | RT401                                                                            |               | 2   |
| ..2                     |    | 76-048001-0      | Teflon                 | 12mm 24AWG                      | B401                                                                             |               | 2   |
| <b>PCB</b>              |    |                  |                        |                                 |                                                                                  |               |     |
| ..2                     |    | 16-53006-12      | R CHANNEL PCB          | VM2.0, FR-4, 1.6mm, 320mm×80mm  |                                                                                  |               | 1   |
| ...3                    |    | 16-53060-10      | PCB                    | VM2.0, FR-4, 1.6mm, 333mm×177mm |                                                                                  |               | 1/2 |
| <b>MECHANICAL PARTS</b> |    |                  |                        |                                 |                                                                                  |               |     |
| ..2                     |    | 62-050302-0      | PEM NUT-PCB            | M3×0.5, KFEB, copper made       | P401, P402, P403, P404                                                           |               | 4   |
| ..2                     |    | 70-048004-0      | Small Heatsink         | 6063, T5                        |                                                                                  |               | 1   |
| ..2                     |    | 70-048005-0      | Small Heatsink B       | 6063, T5                        |                                                                                  |               | 1   |
| ..2                     |    | 61-023206-0      | Self Taping Screws     | BTB3×6,                         | little heatsink(2), little heatsinkB(2), transistor(6)                           |               | 10  |
| ..2                     |    | 61-023208-0      | Self Taping Screws     | BTB3×8,                         | transistor(5)                                                                    |               | 5   |
| ..2                     |    | 69-048029-0      | Busbar C               | T2Y2, 0.1μm gold plated         |                                                                                  |               | 2   |
| .1                      |    | P/N: 01-50305-00 | POWER BOARD            |                                 |                                                                                  |               |     |
| <b>DIODE</b>            |    |                  |                        |                                 |                                                                                  |               |     |
| ..2                     |    | 33-44148-02      | Switch Diode           | 1N4148                          | D605, D606, D607, D705, D706, D707                                               | Pitch=7.5mm   | 6   |
| ..2                     |    | 33-44148-03      | Switch Diode           | 1N4148                          | D91, D92, D601, D608, D609, D610, D615, D616, D701, D708, D709, D710, D715, D716 | Pitch=10mm    | 14  |
| ..2                     |    | 33-40021-01      | Switch Diode           | BAV21                           | D613, D617, D713, D717                                                           | Pitch=10mm    | 4   |
| ..2                     |    | 33-15609-04      | Zener Diode            | 5V6, 1/2W                       | D619, D719                                                                       | Pitch=10mm    | 2   |

| L                 | CP | P/N         | Description                         | Part Type                    | Designator                                                                                                                                                 | Footprint    | Qty |
|-------------------|----|-------------|-------------------------------------|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-----|
| ..2               |    | 33-16809-01 | Zener Diode                         | 6.8V, 1/2W                   | D614, D714                                                                                                                                                 | Pitch=10mm   | 2   |
| ..2               |    | 33-25404-03 | Rectifier Diode                     | 1N5404                       | D604, D704                                                                                                                                                 | Pitch=17.5mm | 2   |
| ...3              |    | 33-25404-00 | Rectifier Diode                     | 1N5404, Taping               | D604, D704                                                                                                                                                 | DO-27        | 2   |
| ..2               |    | 33-60116-00 | Thyristor                           | BT151-500R                   | D602, D603, D702, D703                                                                                                                                     | TO-220       | 4   |
| ..2               |    | 33-30142-00 | Rectifier Bridge                    | DB104                        | B605, B606, B705, B706                                                                                                                                     | BRIDGE 6X9   | 4   |
| ..2               |    | 33-31042-10 | Rectifier Bridge                    | KBU1004                      | B603, B604, B703, B704                                                                                                                                     | BRIDGEGBU    | 4   |
| <b>TRANSISTOR</b> |    |             |                                     |                              |                                                                                                                                                            |              |     |
| ..2               |    | 31-00872-00 | Transistor                          | 2SA872AE                     | Q613, Q713                                                                                                                                                 | TO-92        | 2   |
| ..2               |    | 31-00970-00 | Transistor                          | 2SA970                       | Q605, Q606, Q705, Q706                                                                                                                                     | TO-92        | 4   |
| ..2               |    | 31-01775-00 | Transistor                          | 2SC1775AE                    | Q610, Q611, Q710, Q711                                                                                                                                     | TO-92        | 4   |
| ..2               |    | 31-01015-00 | Transistor                          | 2SA1015-GR                   | Q603, Q607, Q621, Q703, Q707, Q721, Q92, Q91,                                                                                                              | TO-92        | 8   |
| ..2               |    | 31-01815-00 | Transistor                          | 2SC1815-GR                   | Q601, Q604, Q608, Q620, Q701, Q704, Q708, Q720,                                                                                                            | TO-92        | 8   |
| ..2               |    | 31-01220-00 | Transistor                          | KSA1220                      | Q612, Q712                                                                                                                                                 | TO-126MOD    | 2   |
| ..2               |    | 31-02690-00 | Transistor                          | KSC2690                      | Q609, Q709                                                                                                                                                 | TO-126MOD    | 2   |
| <b>ICS</b>        |    |             |                                     |                              |                                                                                                                                                            |              |     |
| ..2               |    | 03-00082-00 | Dual OP-AMP                         | TL082CP/D                    | IC605, IC705                                                                                                                                               | DIP8         | 2   |
| ..2               |    | 03-00317-00 | Regulator                           | LM317M                       | IC603, IC703                                                                                                                                               | TO-220       | 2   |
| ..2               |    | 03-00337-00 | Regulator                           | LM337M                       | IC604, IC704                                                                                                                                               | TO-220       | 2   |
| ..2               |    | 03-00817-00 |                                     | PC817B                       | OP91, OP92                                                                                                                                                 | DIP4         | 2   |
| <b>CAPACITOR</b>  |    |             |                                     |                              |                                                                                                                                                            |              |     |
| ..2               |    | 05-47012-00 | Ceramic Disc Capacitor              | 47pF, 100V, ±10%             | C640, C641, C740, C741                                                                                                                                     | Pitch=5mm    | 4   |
| ..2               |    | 05-47242-00 | High Voltage Ceramic Capacitor      | 4700p, 400V, ±20%, CT81      | C92, C78                                                                                                                                                   | Pitch=10mm   | 2   |
| ..2               |    | 78-001001-0 | Sleeve Boot                         | 811810-23                    |                                                                                                                                                            |              | 2   |
| ..2               |    | 25-22361-05 | Metallized Polyester Film Capacitor | 22nF, 63V, ±5%               | C644, C645, C650, C651, C656, C657, C744, C745, C750, C751, C756, C757                                                                                     | Pitch=5mm    | 12  |
| ..2               |    | 25-22312-06 | Metallized Polyester Film Capacitor | 22nF, 100V, ±5%              | C622, C623, C722, C723, C632, C633, C732, C733, C720, C721                                                                                                 | Pitch=5mm    | 10  |
| ..2               |    | 25-22312-08 | Metallized Polyester Film Capacitor | 22nF, 100V, ±5%              | C620, C621,                                                                                                                                                | Pitch=7.5mm  | 2   |
| ..2               |    | 25-22322-04 | Metallized Polyester Film Capacitor | 22nF, 250V, ±10%             | C617, C618, C630, C631, C717 C718, C730, C731                                                                                                              | Pitch=7.5mm  | 8   |
| ..2               |    | 25-10461-07 | Metallized Polyester Film Capacitor | 0.1uF, 63V, ±5%              | C605, C705                                                                                                                                                 | Pitch=5mm    | 2   |
| ..2               |    | 06-10951-00 | Alu Electrolytic Capacitor          | 1uF, 50V, ±20%               | C660, C662, C667, C760, C762, C767                                                                                                                         | Pitch=5mm    | 6   |
| ..2               |    | 06-47951-00 | Alu Electrolytic Capacitor          | 4.7uF, 50V, ±20%             | C601, C701                                                                                                                                                 | Pitch=5mm    | 2   |
| ..2               |    | 06-10051-00 | Alu Electrolytic Capacitor          | 10uF, 50V, ±20%              | C652, C653, C661, C664, C669, C752, C753, C761, C764, C769                                                                                                 | Pitch=5mm    | 10  |
| ..2               |    | 06-10012-00 | Alu Electrolytic Capacitor          | 10uF, 100V, ±20%             | C642, C742, C643, C743                                                                                                                                     | Pitch=5mm    | 4   |
| ..2               |    | 06-22051-00 | Alu Electrolytic Capacitor          | 22uF, 50V, ±20%              | C654, C655, C754, C755                                                                                                                                     | Pitch=5mm    | 4   |
| ..2               |    | 06-22012-00 | Alu Electrolytic Capacitor          | 22uF, 100V, ±20%             | C646, C647, C746, C747                                                                                                                                     | Pitch=5mm    | 4   |
| ..2               |    | 06-10112-00 | Alu Electrolytic Capacitor          | 100uF, 100V, ±20%            | C636, C637, C638, C639, C736, C737, C738, C739                                                                                                             | Pitch=5mm    | 8   |
| ..2               |    | 06-10212-01 | Alu Electrolytic Capacitor          | 1000uF, 100V, ±20%           | C634, C635, C734, C735                                                                                                                                     | Pitch=10mm   | 4   |
| ..2               |    | 06-22251-03 | Alu Electrolytic Capacitor          | 2200uF, 50V, ±20%            | C648, C649, C748, C749                                                                                                                                     | Pitch=7.5mm  | 4   |
| ..2               |    | 06-22381-02 | Alu Electrolytic Capacitor          | 22000uF, 80V, ±20%, φ40mm×80 | C627, C666, C727, C766                                                                                                                                     | 4PIN         | 4   |
| <b>RESISTOR</b>   |    |             |                                     |                              |                                                                                                                                                            |              |     |
| ..2               |    | 07-10100-10 | Carbon Film Resistor                | 10Ω, 1/4W, ±5%               | R666, R671, R766, R771                                                                                                                                     | Pitch=10mm   | 4   |
| ..2               |    | 07-10101-10 | Carbon Film Resistor                | 100Ω, 1/4W, ±5%              | R606, R607, R693, R706, R707, R793                                                                                                                         | Pitch=10mm   | 6   |
| ..2               |    | 07-10102-10 | Carbon Film Resistor                | 1K, 1/4W, ±5%                | R603, R604, R605, R608, R616, R617, R618, R619, R620, R621, R624, R626, R627, R703, R704, R705, R708, R716, R717, R718, R719, R720, R721, R724, R726, R727 | Pitch=10mm   | 26  |
| ..2               |    | 07-10202-10 | Carbon Film Resistor                | 2K, 1/4W, ±5%                | R93,                                                                                                                                                       | Pitch=10mm   | 1   |
| ..2               |    | 07-10472-10 | Carbon Film Resistor                | 4K7, 1/4W, ±5%               | R97,                                                                                                                                                       | Pitch=10mm   | 1   |
| ..2               |    | 07-10222-10 | Carbon Film Resistor                | 2K2Ω, 1/4W, ±5%              | R625, R725                                                                                                                                                 | Pitch=10mm   | 2   |
| ..2               |    | 07-10103-10 | Carbon Film Resistor                | 10KΩ, 1/4W, ±5%              | R654, R659, R754, R759, R91, R92, R96                                                                                                                      | Pitch=10mm   | 7   |
| ..2               |    | 07-10123-10 | Carbon Film Resistor                | 12KΩ, 1/4W, ±5%              | R95                                                                                                                                                        | Pitch=10mm   | 1   |
| ..2               |    | 07-10223-10 | Carbon Film Resistor                | 22KΩ, 1/4W, ±5%              | R601, R609, R614, R615, R701, R709, R714, R715, R94                                                                                                        | Pitch=10mm   | 9   |
| ..2               |    | 07-10913-10 | Carbon Film Resistor                | 91KΩ, 1/4W, ±5%              | R602, R702                                                                                                                                                 | Pitch=10mm   | 2   |
| ..2               |    | 07-20910-10 | Metal Film Resistor                 | 91Ω, 1/4W, ±5%               | R98                                                                                                                                                        | Pitch=10mm   | 1   |
| ..2               |    | 07-21000-10 | Metal Film Resistor                 | 100Ω, 1/4W, ±1%              | R611, R711                                                                                                                                                 | Pitch=10mm   | 2   |
| ..2               |    | 07-22400-10 | Metal Film Resistor                 | 240Ω, 1/4W, ±1%              | R633, R635, R733, R735                                                                                                                                     | Pitch=10mm   | 4   |
| ..2               |    | 07-23601-10 | Metal Film Resistor                 | 3K6, 1/4W, ±1%               | R632, R634, R732, R734                                                                                                                                     | Pitch=10mm   | 4   |
| ..2               |    | 07-25101-60 | Metal Film Resistor                 | 5k1Ω, 0.6W, ±1%              | R628, R728                                                                                                                                                 | Pitch=10mm   | 2   |
| ..2               |    | 07-22001-60 | Metal Film Resistor                 | 2kΩ, 0.6W, ±1%               | R630, R730                                                                                                                                                 | Pitch=10mm   | 2   |
| ..2               |    | 07-29101-10 | Metal Film Resistor                 | 9K1Ω, 1/4W, ±1%              | R664, R669, R764, R769, R612, R712,                                                                                                                        | Pitch=10mm   | 6   |
| ..2               |    | 07-21002-10 | Metal Film Resistor                 | 10KΩ, 1/4W, ±1%              | R629, R631, R729, R731,                                                                                                                                    | Pitch=10mm   | 4   |
| ..2               |    | 07-21502-10 | Metal Film Resistor                 | 15KΩ, 1/4W, ±1%              | R665, R765, R670, R770,                                                                                                                                    | Pitch=10mm   | 4   |
| ..2               |    | 07-20183-10 | Metal Film Resistor                 | 18KΩ, 1/4W, ±5%              | R652, R752                                                                                                                                                 | Pitch=10mm   | 2   |
| ..2               |    | 07-20473-10 | Metal Film Resistor                 | 47KΩ, 1/4W, ±5%              | R643, R743                                                                                                                                                 | Pitch=10mm   | 2   |

| L                       | CP | P/N              | Description                     | Part Type                 | Designator                                     | Footprint                    | Qty |
|-------------------------|----|------------------|---------------------------------|---------------------------|------------------------------------------------|------------------------------|-----|
| ..2                     |    | 07-26202-10      | Metal Film Resistor             | 62KΩ, 1/4W, ±1%           | R658, R758                                     | Pitch=10mm                   | 2   |
| ..2                     |    | 07-20104-10      | Metal Film Resistor             | 100KΩ, 1/4W, ±5%          | R656, R756                                     | Pitch=10mm                   | 2   |
| ..2                     |    | 07-20154-10      | Metal Film Resistor             | 150KΩ, 1/4W, ±5%          | R667, R767                                     | Pitch=10mm                   | 2   |
| ..2                     |    | 07-20224-10      | Metal Film Resistor             | 220KΩ, 1/4W, ±5%          | R655, R661, R755, R761, R751, R651,            | Pitch=10mm                   | 6   |
| ..2                     |    | 07-20474-10      | Metal Film Resistor             | 470KΩ, 1/4W, ±5%          | R613, R713                                     | Pitch=10mm                   | 2   |
| ..2                     |    | 07-20684-10      | Metal Film Resistor             | 680KΩ, 1/4W, ±5%          | R636, R736                                     | Pitch=10mm                   | 2   |
| ..2                     |    | 07-40257-03      | Cement Resistor                 | 0.025Ω, 3W, ±2%           | R610, R710                                     | Pitch=10mm                   | 2   |
| ..2                     |    | 07-50339-01      | Fusible Resistor                | 3.3Ω, 1/2W, ±5%           | R622, R623, R722, R723                         | Pitch=12.5mm                 | 4   |
| ..2                     |    | 07-50228-11      | Fusible Resistor                | 0.22 Ω, 1W, ±10%          | R646, R647, R746, R747                         | Pitch=12.5mm<br>(D3.9×L10.5) | 4   |
| ..2                     |    | 07-50228-12      | Fusible Resistor                | 0.22 Ω, 1/2W, ±10%        | R648, R649, R748, R749                         | Pitch=12.5mm                 | 4   |
|                         |    |                  |                                 |                           |                                                |                              |     |
| <b>POTS</b>             |    |                  |                                 |                           |                                                |                              |     |
| ..2                     |    | 09-02682-00      | Semi-POT                        | 6K8Ω                      | VR601, VR701                                   | VR                           | 2   |
|                         |    |                  |                                 |                           |                                                |                              |     |
| <b>CONNECTOR</b>        |    |                  |                                 |                           |                                                |                              |     |
| ..2                     |    | 13-12503-00      | Connector                       | 3PIN.2.54                 | TP601, TP701                                   | S=2.5mm                      | 2   |
| ..2                     |    | 13-22504-00      | Connector                       | LD2.5A-4A                 | CZ74                                           | S=2.5mm                      | 1   |
| ..2                     |    | 13-22516-01      | Connector                       | 3012-16GRB                | CZ73, CZ75                                     | S=2.5mm                      | 2   |
| ..2                     |    | 13-21030-02      | FFC Socket                      | 1.0-15-30P                | CZ72                                           |                              | 1   |
| ..2                     |    | 13-23905-30      | Connector                       | B5P-VH                    | CB603, CB604, CB703, CB704                     | S=3.9mm                      | 4   |
| ..2                     |    | 13-23902-30      | Connector                       | B2P-VH                    | CB601, CB701                                   | S=3.9mm                      | 2   |
| ..2                     |    | 13-23903-11      | Connector                       | 7.92A-2A VH               | S1                                             | S=7.92mm                     | 1   |
| ..2                     |    | 13-23905-04      | Connector                       | 09-48-4058                | CZ71                                           | S=3.9mm                      | 1   |
| ..2                     |    | 13-21210-00      | Connector                       | 10PIN                     | CZ603, CZ703                                   | CB10                         | 2   |
| ..2                     |    | 17-07102-00      | AC INLET                        | GSP1.9500.1/R-30190 2PIN  | AC INLET                                       |                              | 1   |
|                         |    |                  |                                 |                           |                                                |                              |     |
| <b>SWITCHES</b>         |    |                  |                                 |                           |                                                |                              |     |
| ..2                     |    | 11-01101-03      | Power Switch                    | RF-1003-BB2               | S1                                             | POWER2                       | 1   |
|                         |    |                  |                                 |                           |                                                |                              |     |
| <b>AC FILTER</b>        |    |                  |                                 |                           |                                                |                              |     |
| ..2                     |    | 22-00010-00      | EMI FILTER                      | 250V 10A 50/60HZ          | EMI FILTER                                     |                              | 1   |
|                         |    |                  |                                 |                           |                                                |                              |     |
| <b>RELAY</b>            |    |                  |                                 |                           |                                                |                              |     |
| ..2                     |    | 12-02101-04      | Relay                           | DH1U 15A/250V 12V         | RL91                                           |                              | 1   |
|                         |    |                  |                                 |                           |                                                |                              |     |
| <b>JUMPER</b>           |    |                  |                                 |                           |                                                |                              |     |
| ..2                     |    | 21-10101-00      | Link                            | L=10mm                    | J603, J701, J703                               |                              | 3   |
| ..2                     |    | 21-10201-00      | Link                            | L=20mm                    | J602, J702                                     |                              | 2   |
|                         |    |                  |                                 |                           |                                                |                              |     |
| <b>PCB</b>              |    |                  |                                 |                           |                                                |                              |     |
| ..2                     |    | 16-53005-00      | PSU PCB                         | FR-4, 1.6mm, 280mm×216mm  |                                                |                              | 1   |
|                         |    |                  |                                 |                           |                                                |                              |     |
| <b>MECHANICAL PARTS</b> |    |                  |                                 |                           |                                                |                              |     |
| ..2                     |    | 62-050302-0      | PEM NUT-PCB                     | M3×0.5, KFEB, copper made | P601, P602, P603, P604, P701, P702, P703, P704 |                              | 8   |
| ..2                     |    | 61-023206-0      | Self Taping Screws              | BTB3×6,                   | AC INLET(2)                                    |                              | 2   |
| ..2                     |    | 70-004001-0      | Heat sink                       | F25                       |                                                |                              | 4   |
| ..2                     |    | 70-048015-0      | Heat sink                       | Heatsink D                |                                                |                              | 8   |
| ..2                     |    | 61-023206-0      | SCREW                           | BTB3×6                    | BT151(F25) LM337 LM317                         |                              | 8   |
| ..2                     |    | 61-023208-0      | SCREW                           | BTB3×8                    | KSA1220 KSC2690                                |                              | 4   |
| ..2                     |    | 61-023508-0      | SCREW                           | MB3×8,                    | Filter(2)                                      |                              | 2   |
| ..2                     |    | 62-010302-1      | NUT                             | M3 NUT                    |                                                |                              | 2   |
| ..2                     |    | 75-048023-0      | Heat sink Washer                | epon(YELLOW), T=0.5mm     |                                                |                              | 4   |
|                         |    |                  |                                 |                           |                                                |                              |     |
| ..1                     |    | P/N: 01-50303-00 | CONNECT BOARD                   |                           |                                                |                              |     |
| <b>DIODE</b>            |    |                  |                                 |                           |                                                |                              |     |
| ..2                     |    | 33-12400-11      | Zener Diode                     | 24V, 1/2W                 | D990, D991                                     | MINIMELF                     | 2   |
|                         |    |                  |                                 |                           |                                                |                              |     |
| <b>TRANSISTOR</b>       |    |                  |                                 |                           |                                                |                              |     |
| ..2                     |    | 31-02983-01      | Transistor                      | 2SC2983Y                  | Q991, Q990                                     | 2-7J1A                       | 2   |
|                         |    |                  |                                 |                           |                                                |                              |     |
| <b>CAPACITOR</b>        |    |                  |                                 |                           |                                                |                              |     |
| ..2                     |    | 26-10451-01      | Ceramic Chip Capacitor          | 100N                      | C991, C993                                     | 0805                         | 2   |
| ..2                     |    | 06-10031-02      | Chip Alu Electrolytic Capacitor | 10uF, 35V, ±20%           | C994, C990                                     | 5×5.4                        | 2   |
|                         |    |                  |                                 |                           |                                                |                              |     |
| <b>RESISTOR</b>         |    |                  |                                 |                           |                                                |                              |     |
| ..2                     |    | 07-90562-01      | Chip Resistor                   | 5.6K                      | R990, R991                                     | 0805                         | 2   |
|                         |    |                  |                                 |                           |                                                |                              |     |
| <b>CONNECTOR</b>        |    |                  |                                 |                           |                                                |                              |     |
| ..2                     |    | 13-22526-02      | CONNECTOR                       | 26PIN                     | CZ94                                           | S=2.5mm                      | 1   |
| ..2                     |    | 13-22514-02      | CONNECTOR                       | 14PIN                     | CZ93                                           | S=2.5mm                      | 1   |
| ..2                     |    | 13-22516-02      | CONNECTOR                       | 16PIN                     | CZ92, CZ97                                     | S=2.5mm                      | 2   |
|                         |    |                  |                                 |                           |                                                |                              |     |
| <b>PCB</b>              |    |                  |                                 |                           |                                                |                              |     |
| ..2                     |    | 16-53003-00      | CONNECT PCB                     | FR-4, 1.6mm, 62mm×68mm    |                                                |                              | 1   |
| ..2                     |    | 16-53010-00      | PCB                             | FR-4, 1.6mm, 170mm×320mm  |                                                |                              | 1/6 |
|                         |    |                  |                                 |                           |                                                |                              |     |
| <b>MECHANICAL PARTS</b> |    |                  |                                 |                           |                                                |                              |     |

| L          | CP | P/N             | Description                         | Part Type               | Designator                                                                                                                                                                                                                                     | Footprint    | Qty |
|------------|----|-----------------|-------------------------------------|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-----|
| ..2        |    | 85-008001-1     | Spacer Support                      | PMB-1                   |                                                                                                                                                                                                                                                |              | 1   |
| ..2        |    | 61-023208-0     | Self Taping Screws                  | BTB3×8,                 | PCB INTERVAL(1)                                                                                                                                                                                                                                |              | 1   |
| ..1        |    | P/N:01-50309-00 | PREM BOARD                          |                         |                                                                                                                                                                                                                                                |              |     |
| DIODE      |    |                 |                                     |                         |                                                                                                                                                                                                                                                |              |     |
| ..2        |    | 33-44148-11     | Switch Diode SMD                    | LL4148                  | 1D12, 1D13, 1D14, 2D12, 2D13, 2D14, 2D01, 2D02, 2D03, 2D04, 2D05, 2D06, 2D07, 2D08, 2D09, 2D10, 2D11, 2D15, 2D16                                                                                                                               | MINIMELF     | 19  |
| ..2        |    | 33-12409-01     | Zener Diode SMD                     | 2.4V, 1/2W              | 1D19, 1D20, 1D21, 2D21                                                                                                                                                                                                                         | MINIMELF     | 4   |
| ..2        |    | 33-12000-11     | Zener Diode                         | 20V, 1/2W               | 1D17, 1D18, 2D17, 2D18                                                                                                                                                                                                                         | MINIMELF     | 4   |
| TRANSISTOR |    |                 |                                     |                         |                                                                                                                                                                                                                                                |              |     |
| ..2        |    | 31-00114-01     | Digital transistor                  | DTA114EKA               | 1Q14 1Q16 1Q18 2Q14 2Q16 2Q18 2Q24                                                                                                                                                                                                             | SC59         | 7   |
| ..2        |    | 31-00114-05     | Digital transistor                  | DTC114EKA               | 1Q13 1Q15 1Q17 2Q13 2Q15 2Q17 2Q23                                                                                                                                                                                                             | SC59         | 7   |
| ..2        |    | 31-01815-01     | Transistor                          | 2SC1815                 | 2Q19, 1Q19, 2Q01, 2Q02, 2Q03, 2Q04 2Q05 2Q06 2Q07 2Q08 2Q09 2Q10 2Q11 2Q12                                                                                                                                                                     | SC59         | 14  |
| ..2        |    | 31-03326-01     | Transistor                          | 2SC3326A                | Q101, Q102, Q103, Q201, Q202, Q203, 1Q27,1Q28, Q230, Q231                                                                                                                                                                                      | SC59         | 10  |
| ..2        |    | 31-01220-00     | Transistor                          | KSA1220AYSTU            | 1Q21, 2Q21                                                                                                                                                                                                                                     | TO-126       | 2   |
| ..2        |    | 31-02690-00     | Transistor                          | KSC2690AYASTU           | 1Q22, 2Q22                                                                                                                                                                                                                                     | TO-126       | 2   |
| ICS        |    |                 |                                     |                         |                                                                                                                                                                                                                                                |              |     |
| ..2        |    | 03-04094-02     | REGISTER                            | CD4094                  | U110, U210,U208, U213                                                                                                                                                                                                                          | DSOP16       | 4   |
| ..2        |    | 03-02134-00     | Opamp                               | OPA2134UA               | U206, U211                                                                                                                                                                                                                                     | SO8          | 2   |
| ..2        |    | 03-08512-01     | Opamp                               | AD8512ARZ               | U102, U202                                                                                                                                                                                                                                     | SO-8         | 2   |
| ..2        |    | 03-92740-01     | Analog Switch                       | TC9274F-001             | U105, U205, U209                                                                                                                                                                                                                               | QFP44-P-1414 | 3   |
| ..2        |    | 03-04621-01     | Analog Switch                       | MA×4621CSE              | U104, U107, U204, U207                                                                                                                                                                                                                         | SO16         | 4   |
| CAPACITOR  |    |                 |                                     |                         |                                                                                                                                                                                                                                                |              |     |
| ..2        |    | 26-22051-01     | Ceramic Chip Capacitor              | 22pF, 50V,±5%           | C107, C108, C207, C208                                                                                                                                                                                                                         | 0805         | 4   |
| ..2        |    | 26-10151-01     | Ceramic Chip Capacitor              | 100pF, 50V,±5%          | 1C26, 1C27, 1C28, C214, C114, 2C02, 2C04, 2C06, 2C08, 2C10, 2C12, 2C26, 2C28, 2C27, 2C14, 2C16, 2C18, 2C20, 2C22, 2C23, 2C53, C201, C202, C203, C204, C205, C206, C235, C237, C220, C221, C222, C223, C224, C225                               | 0805         | 35  |
| ..2        |    | 26-22151-01     | Ceramic Chip Capacitor              | 220pF, 50V,±5%          | 1C59, C232                                                                                                                                                                                                                                     | 0805         | 2   |
| ..2        |    | 26-22251-21     | Ceramic Chip Capacitor              | 2.2nF, 50V,±5%          | C140, C141, C142, C240, C241, C242                                                                                                                                                                                                             | 0805         | 6   |
| ..2        |    | 26-10351-01     | Ceramic Chip Capacitor              | 10nF, 50V,±10%          | 1C23, 2C01, 2C03, 2C05, 2C07, 2C09, 2C11, 2C13, 2C15, 2C17, 2C19, 2C21                                                                                                                                                                         | 0805         | 12  |
| ..2        |    | 26-10451-01     | Ceramic Chip Capacitor              | 100nF, 50V,+80%-20%     | 1C24, 1C25, 1C33, 1C34, 1C35, 1C36, 1C37, 1C38, 1C39, 1C40, 1C41, 1C42, 1C43, 1C46, 1C47, 1C48, 2C24, 2C25, 2C33, 2C34, 2C35, 2C36, 2C37, 2C38, 2C39, 2C40, 2C41, 2C42, 2C43, 2C46, 2C47, 2C48, 2C49, 2C50, 2C51, 2C52, C217, C230, C231, C233 | 0805         | 40  |
| ..2        |    | 26-10511-01     | Ceramic Chip Capacitor              | 1uF, 16V, ±10%          | C119, C128, C219, C228                                                                                                                                                                                                                         | 0805         | 4   |
| ..2        |    | 25-56361-00     | Metallized Polyester Film Capacitor | 56nF, 63V, ±5%          | C216                                                                                                                                                                                                                                           | Pitch=5mm    | 1   |
| ..2        |    | 25-10461-07     | Metallized Polyester Film Capacitor | 100nF, 63V, ±5%         | C215                                                                                                                                                                                                                                           | Pitch=5mm    | 1   |
| ..2        |    | 25-22461-02     | Metallized Polyester Film Capacitor | 220nF, 63V, ±5%         | C118, C138, C218, C238, 2C60                                                                                                                                                                                                                   | Pitch=5mm    | 5   |
| ..2        |    | 25-10561-02     | Metallized Polyester Film Capacitor | 1uF, 63V, ±5%           | C139, C239, C129, C229                                                                                                                                                                                                                         | Pitch=5mm    | 4   |
| ..2        |    | 06-10111-10     | Alu Electrolytic Capacitor          | 100uF, 16V, ±20%, CD11A | C126, C226                                                                                                                                                                                                                                     | Pitch=5mm    | 2   |
| ..2        |    | 06-22111-10     | Alu Electrolytic Capacitor          | 220uF, 16V, ±20%, CD11A | C136, C236                                                                                                                                                                                                                                     | Pitch=5mm    | 2   |
| RESISTOR   |    |                 |                                     |                         |                                                                                                                                                                                                                                                |              |     |
| ..2        |    | 07-90000-01     | Chip Resistor                       | 0Ω, ±5%                 | 1R102, 1R70                                                                                                                                                                                                                                    | 0805         | 2   |
| ..2        |    | 07-90000-02     | Chip Resistor                       | 0Ω, ±5%                 | L1, L2, L3, L4                                                                                                                                                                                                                                 | 1206         | 4   |
| ..2        |    | 07-99097-01     | Chip Resistor                       | 0.909Ω, ±1%             | R143, R243                                                                                                                                                                                                                                     | 0805         | 2   |
| ..2        |    | 07-91158-01     | Chip Resistor                       | 1.15Ω, ±1%              | R142, R242                                                                                                                                                                                                                                     | 0805         | 2   |
| ..2        |    | 07-91478-01     | Chip Resistor                       | 1.47Ω, ±1%              | R141, R241                                                                                                                                                                                                                                     | 0805         | 2   |
| ..2        |    | 07-91508-01     | Chip Resistor                       | 1.5Ω, ±1%               | 1R105, 2R105                                                                                                                                                                                                                                   | 0805         | 2   |
| ..2        |    | 07-91878-01     | Chip Resistor                       | 1.87Ω, ±1%              | R140, R240                                                                                                                                                                                                                                     | 0805         | 2   |
| ..2        |    | 07-92328-01     | Chip Resistor                       | 2.32Ω, ±1%              | R139, R239                                                                                                                                                                                                                                     | 0805         | 2   |
| ..2        |    | 07-92808-01     | Chip Resistor                       | 2.8Ω, ±1%               | R138, R238                                                                                                                                                                                                                                     | 0805         | 2   |
| ..2        |    | 07-90339-01     | Chip Resistor                       | 3.3Ω, ±5%               | 1R108                                                                                                                                                                                                                                          | 0805         | 1   |
| ..2        |    | 07-93578-01     | Chip Resistor                       | 3.57Ω, ±1%              | R144, R244                                                                                                                                                                                                                                     | 0805         | 2   |
| ..2        |    | 07-93658-01     | Chip Resistor                       | 3.65Ω, ±1%              | R137, R237                                                                                                                                                                                                                                     | 0805         | 2   |
| ..2        |    | 07-94758-01     | Chip Resistor                       | 4.75Ω, ±1%              | R136, R236                                                                                                                                                                                                                                     | 0805         | 2   |
| ..2        |    | 07-95908-01     | Chip Resistor                       | 5.90Ω, ±1%              | R135, R235                                                                                                                                                                                                                                     | 0805         | 2   |
| ..2        |    | 07-96818-01     | Chip Resistor                       | 6.81Ω, ±1%              | R134, R234                                                                                                                                                                                                                                     | 0805         | 2   |
| ..2        |    | 07-99538-01     | Chip Resistor                       | 9.53Ω, ±1%              | R133, R233                                                                                                                                                                                                                                     | 0805         | 2   |
| ..2        |    | 07-91009-01     | Chip Resistor                       | 10Ω, ±1%                | R14, R16, R24, R26                                                                                                                                                                                                                             | 0805         | 4   |
| ..2        |    | 07-91189-01     | Chip Resistor                       | 11.8Ω, ±1%              | R232, R132                                                                                                                                                                                                                                     | 0805         | 2   |

| L                       | CP | P/N         | Description        | Part Type                      | Designator                                                                                                                                     | Footprint  | Qty |
|-------------------------|----|-------------|--------------------|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|------------|-----|
| ..2                     |    | 07-91509-01 | Chip Resistor      | 15Ω, ±1%                       | R131, R231                                                                                                                                     | 0805       | 2   |
| ..2                     |    | 07-91879-01 | Chip Resistor      | 18.7Ω, ±1%                     | R130, R230                                                                                                                                     | 0805       | 2   |
| ..2                     |    | 07-92329-01 | Chip Resistor      | 23.2Ω, ±1%                     | R229, R129                                                                                                                                     | 0805       | 2   |
| ..2                     |    | 07-92749-01 | Chip Resistor      | 27.4Ω, ±1%                     | R1002, R2002                                                                                                                                   | 0805       | 2   |
| ..2                     |    | 07-92809-01 | Chip Resistor      | 28Ω, ±1%                       | R1001, R2001                                                                                                                                   | 0805       | 2   |
| ..2                     |    | 07-92879-01 | Chip Resistor      | 28.7Ω, ±1%                     | R128, R228                                                                                                                                     | 0805       | 2   |
| ..2                     |    | 07-93309-01 | Chip Resistor      | 33Ω, ±1%                       | R285, R112, R212, R185                                                                                                                         | 0805       | 4   |
| ..2                     |    | 07-93839-01 | Chip Resistor      | 38.3Ω, ±1%                     | R127, R227                                                                                                                                     | 0805       | 2   |
| ..2                     |    | 07-94649-01 | Chip Resistor      | 46.4Ω, ±1%                     | R126, R226                                                                                                                                     | 0805       | 2   |
| ..2                     |    | 07-95769-01 | Chip Resistor      | 57.6Ω, ±1%                     | 1R94, 2R94                                                                                                                                     | 0806       | 2   |
| ..2                     |    | 07-95909-01 | Chip Resistor      | 59Ω, ±1%                       | R125, R225                                                                                                                                     | 0805       | 2   |
| ..2                     |    | 07-96049-01 | Chip Resistor      | 60.4Ω, ±1%                     | R186, R187, R286, R287                                                                                                                         | 0805       | 4   |
| ..2                     |    | 07-97509-01 | Chip Resistor      | 75Ω, ±1%                       | R124, R224                                                                                                                                     | 0805       | 2   |
| ..2                     |    | 07-98459-01 | Chip Resistor      | 84.5Ω, ±1%                     | 1R95, 2R95                                                                                                                                     | 0805       | 2   |
| ..2                     |    | 07-99539-01 | Chip Resistor      | 95.3Ω, ±1%                     | R123, R223                                                                                                                                     | 0805       | 2   |
| ..2                     |    | 07-99769-01 | Chip Resistor      | 97.6Ω, ±1%                     | R170, R270                                                                                                                                     | 0805       | 2   |
| ..2                     |    | 07-91210-01 | Chip Resistor      | 121Ω, ±1%                      | R122, R222                                                                                                                                     | 0805       | 2   |
| ..2                     |    | 07-91500-01 | Chip Resistor      | 150Ω, ±1%                      | R121, R221                                                                                                                                     | 0805       | 2   |
| ..2                     |    | 07-91800-01 | Chip Resistor      | 180Ω, ±1%                      | 1R88, 1R92, 2R88, 2R92                                                                                                                         | 0805       | 4   |
| ..2                     |    | 07-91910-01 | Chip Resistor      | 191Ω, ±1%                      | R120, R220, R173, R273,                                                                                                                        | 0805       | 4   |
| ..2                     |    | 07-91960-01 | Chip Resistor      | 196Ω, ±1%                      | R174, R274                                                                                                                                     | 0805       | 2   |
| ..2                     |    | 07-92000-01 | Chip Resistor      | 200Ω, ±1%                      | 1R63, 1R64, R289, R293                                                                                                                         | 0805       | 4   |
| ..2                     |    | 07-92200-01 | Chip Resistor      | 220Ω, ±1%                      | R201, R203, R205, R207, R209, R211, R213, R113                                                                                                 | 0805       | 8   |
| ..2                     |    | 07-92550-01 | Chip Resistor      | 255Ω, ±1%                      | R119, R219                                                                                                                                     | 0805       | 2   |
| ..2                     |    | 07-92940-01 | Chip Resistor      | 294Ω, ±1%                      | R118, R218                                                                                                                                     | 0805       | 2   |
| ..2                     |    | 07-93570-01 | Chip Resistor      | 357Ω, ±1%                      | R117, R217                                                                                                                                     | 0805       | 2   |
| ..2                     |    | 07-94300-01 | Chip Resistor      | 430Ω, ±1%                      | 2R39, 2R40, 2R43, 2R44                                                                                                                         | 0805       | 4   |
| ..2                     |    | 07-94530-01 | Chip Resistor      | 453Ω, ±1%                      | R116, R216                                                                                                                                     | 0805       | 2   |
| ..2                     |    | 07-91001-01 | Chip Resistor      | 1k, ±1%                        | 1R75, 1R77, 1R79, 1R80, 1R82, 1R83, 2R75, 2R77, 2R79, 2R80, 2R82, 2R83,                                                                        | 0805       | 12  |
| ..2                     |    | 07-93241-01 | Chip Resistor      | 3.24KΩ, ±1%                    | R176, R276                                                                                                                                     | 0805       | 2   |
| ..2                     |    | 07-90472-01 | Chip Resistor      | 4K7Ω, ±5%                      | 1R23, 2R01, 2R02, 2R03, 2R04, 2R05, 2R06, 2R07, 2R08, 2R09, 2R10, 2R11, 2R12, 2R13, 2R14, 2R15, 2R16, 2R17, 2R18, 2R19, 2R20, 2R21, 2R22, 2R23 | 0805       | 24  |
| ..2                     |    | 07-95101-01 | Chip Resistor      | 5K1Ω, ±1%                      | 1R47, 1R48, 1R55, 1R56, 1R60                                                                                                                   | 0805       | 5   |
| ..2                     |    | 07-95601-01 | Chip Resistor      | 5K6Ω, ±1%                      | 2R38, 2R41, 2R42, 2R45                                                                                                                         | 0805       | 4   |
| ..2                     |    | 07-96651-01 | Chip Resistor      | 6.65KΩ, ±1%                    | R175, R275                                                                                                                                     | 0805       | 2   |
| ..2                     |    | 07-91002-01 | Chip Resistor      | 10KΩ, ±1%                      | 1R71, 1R101, 1R69, 1R59, 1R76, 1R78, 1R81, 1R87, 1R91, 1R103, 2R76, 2R78, 2R81, 2R87, 2R91,                                                    | 0805       | 15  |
| ..2                     |    | 07-92202-01 | Chip Resistor      | 22KΩ, ±1%                      | 1R85, 2R85                                                                                                                                     | 0805       | 2   |
| ..2                     |    | 07-92802-01 | Chip Resistor      | 28KΩ, ±1%                      | R292                                                                                                                                           | 0805       | 1   |
| ..2                     |    | 07-93302-01 | Chip Resistor      | 33KΩ, ±1%                      | R184, R284                                                                                                                                     | 0805       | 2   |
| ..2                     |    | 07-93742-01 | Chip Resistor      | 37K4Ω, ±1%                     | R291                                                                                                                                           | 0805       | 1   |
| ..2                     |    | 07-90104-01 | Chip Resistor      | 100KΩ, ±5%                     | 1R68, R295                                                                                                                                     | 0805       | 2   |
| ..2                     |    | 07-91003-01 | Chip Resistor      | 100KΩ, ±1%                     | R13, R15, R23, R25                                                                                                                             | 0805       | 4   |
| ..2                     |    | 07-90224-01 | Chip Resistor      | 220KΩ, ±5%                     | R177, R277                                                                                                                                     | 0805       | 2   |
| ..2                     |    | 07-90304-01 | Chip Resistor      | 300KΩ, ±5%                     | R288                                                                                                                                           | 0805       | 1   |
| ..2                     |    | 07-90105-01 | Chip Resistor      | 1MΩ, ±5%                       | R182, R282, R22, R183, R202, R204, R206, R208, R210, R283, R290, 1R89, 2R89, 1R93, 2R93, 1R90, 2R90                                            | 0805       | 17  |
| ..2                     |    | 07-90225-01 | Chip Resistor      | 2M2Ω, ±5%                      | R178, R278                                                                                                                                     | 0805       | 2   |
| ..2                     |    | 07-96040-02 | Chip Resistor      | 604Ω, ±1%                      | R171, R172, R271, R272                                                                                                                         | 1206       | 4   |
| ..2                     |    | 07-21911-60 | Chip Resistor      | 1K91Ω, ±1% 0.6W                | R181, R281                                                                                                                                     | Pitch=10mm | 2   |
| ..2                     |    | 07-24990-60 | Chip Resistor      | 499Ω, ±1% 0.6W                 | R179, R279, 1R84, 2R84                                                                                                                         | Pitch=10mm | 4   |
| ..2                     |    | 07-24420-60 | Chip Resistor      | 442Ω, ±1% 0.6W                 | 1R86, 2R86                                                                                                                                     | Pitch=10mm | 2   |
|                         |    |             |                    |                                |                                                                                                                                                |            |     |
| <b>RELAY</b>            |    |             |                    |                                |                                                                                                                                                |            |     |
| ..2                     |    | 12-02202-04 | Relay              | 24V                            | RL201, RL202, RL203, RL204, RL205, RL206, RL207, RL208, RL209, RL210, RL211, RL212                                                             |            | 12  |
|                         |    |             |                    |                                |                                                                                                                                                |            |     |
|                         |    |             |                    |                                |                                                                                                                                                |            |     |
| <b>Connector</b>        |    |             |                    |                                |                                                                                                                                                |            |     |
| ..2                     |    | 13-22503-00 | Connector          | 3PIN                           | J103, J203                                                                                                                                     | S=2.5mm    | 2   |
| ..2                     |    | 13-22504-06 | Connector          | 4PIN                           | J104, J204, J105, J205                                                                                                                         | S=2.5mm    | 4   |
| ..2                     |    | 13-21210-00 | Connector          | 10PIN                          | J108, J208                                                                                                                                     | S=1.25mm   | 2   |
| ..2                     |    | 13-22526-00 | Connector          | 26PIN                          | J201                                                                                                                                           | S=2.5mm    | 1   |
| ..2                     |    | 13-22508-01 | Connector          | 8PIN                           | J101                                                                                                                                           | S=2.5mm    | 1   |
| ..2                     |    | 17-01001-16 | RCA                | HANSONG RCA,RED                | RRCA1, RRCA2, RRCA3, RRCA4, RRCA5, RRCA6, RRCA7, RRCA8, RRCA9, RRCA10                                                                          | RCAM       | 10  |
|                         |    |             |                    |                                |                                                                                                                                                |            |     |
| <b>MECHANICAL PARTS</b> |    |             |                    |                                |                                                                                                                                                |            |     |
| ..2                     |    | 61-022206-0 | Self Taping Screws | BTB2*6,                        | MODULE HOUSE(8)                                                                                                                                |            | 8   |
| ..2                     |    | 69-048027-0 | PRE-BUSBAR L       | PRE-BUSBAR L, 0.1u GOLD PLATED | H107                                                                                                                                           | BUS BARD   | 1   |

| L                       | CP | P/N              | Description                         | Part Type                      | Designator                                                                                                                                                                                                                                                             | Footprint      | Qty    |
|-------------------------|----|------------------|-------------------------------------|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|--------|
| ..2                     |    | 69-048028-0      | PRE-BUSBAR R                        | PRE-BUSBAR R, 0.1u GOLD PLATED | H207                                                                                                                                                                                                                                                                   | BUS BARD       | 1      |
|                         |    |                  |                                     |                                |                                                                                                                                                                                                                                                                        |                |        |
| <b>PCB</b>              |    |                  |                                     |                                |                                                                                                                                                                                                                                                                        |                |        |
| ..2                     |    | 16-53009-00      | PREMAIN BOARD                       | FR-4, 1.6mm, 150mm×240mm       |                                                                                                                                                                                                                                                                        |                | 1      |
| ...3                    |    | 16-53020-00      | PCB                                 | FR-4, 1.6mm, 220mm×250mm       |                                                                                                                                                                                                                                                                        |                | 1/2    |
|                         |    |                  |                                     |                                |                                                                                                                                                                                                                                                                        |                |        |
| ..2                     |    | 01-50310-00      | Line/Drive Amp                      | PREAMP MODULE                  | U101, U201                                                                                                                                                                                                                                                             |                | 2      |
| ...3                    |    | 01-50310-01      | MODULE BOARD                        |                                |                                                                                                                                                                                                                                                                        |                | 4      |
|                         |    |                  |                                     |                                |                                                                                                                                                                                                                                                                        |                |        |
| <b>DIODE</b>            |    |                  |                                     |                                |                                                                                                                                                                                                                                                                        |                |        |
| ....4                   |    | 33-44148-11      | Switch Diode SMD                    | LL4148                         | MD106, MD107, MD108, MD109, MD110                                                                                                                                                                                                                                      | LL34           | 5×4    |
| ....4                   |    | 33-15609-03      | Zener Diode                         | 5V6, 1/2W                      | MD101                                                                                                                                                                                                                                                                  | LL34           | 1×4    |
|                         |    |                  |                                     |                                |                                                                                                                                                                                                                                                                        |                |        |
| <b>TRANSISTOR</b>       |    |                  |                                     |                                |                                                                                                                                                                                                                                                                        |                |        |
| ....4                   |    | 31-00209-00      | J-FET                               | 2SK209GR                       | MQ110                                                                                                                                                                                                                                                                  | SOT-23 (SC-59) | 1×4    |
| ....4                   |    | 31-01312-00      | Transistor                          | 2SA1312                        | MQ106, MQ107, MQ108, MQ109                                                                                                                                                                                                                                             | SOT-23         | 4×4    |
| ....4                   |    | 31-03324-00      | Transistor                          | 2SC3324                        | MQ103, MQ111, MQ112, MQ101                                                                                                                                                                                                                                             | SOT-23         | 4×4    |
| ....4                   |    | 31-01225-00      | Transistor                          | 2SA1225Y                       | MQ115                                                                                                                                                                                                                                                                  | 2-7B1A         | 1×4    |
| ....4                   |    | 31-02983-00      | Transistor                          | 2SC2983Y                       | MQ114                                                                                                                                                                                                                                                                  | 2-7B1A         | 1×4    |
|                         |    |                  |                                     |                                |                                                                                                                                                                                                                                                                        |                |        |
| <b>CAPACITOR</b>        |    |                  |                                     |                                |                                                                                                                                                                                                                                                                        |                |        |
| ....4                   |    | 26-22151-01      | Ceramic Chip Capacitor              | 220pF, 50V, ±5%                | MC112                                                                                                                                                                                                                                                                  | 0805           | 1×4    |
| ....4                   |    | 26-47151-01      | Ceramic Chip Capacitor              | 470pF, 50V, ±5%                | MC107                                                                                                                                                                                                                                                                  | 0805           | 1×4    |
| ....4                   |    | 26-10251-11      | Ceramic Chip Capacitor              | 1N, 50V, ±5%                   | MC105, MC106                                                                                                                                                                                                                                                           | 0805           | 2×4    |
| ....4                   |    | 26-22251-21      | Ceramic Chip Capacitor              | 2N2, 50V, ±5%                  | MC110                                                                                                                                                                                                                                                                  | 0805           | 1×4    |
| ....4                   |    | 26-10351-01      | Ceramic Chip Capacitor              | 10N, 50V, ±10%                 | MC111                                                                                                                                                                                                                                                                  | 0805           | 1×4    |
| ....4                   |    | 26-10451-01      | Ceramic Chip Capacitor              | 100N, 50V, +80%-20%            | MC108, MC109, MC101                                                                                                                                                                                                                                                    | 0805           | 3×4    |
|                         |    |                  |                                     |                                |                                                                                                                                                                                                                                                                        |                |        |
| <b>RESISTOR</b>         |    |                  |                                     |                                |                                                                                                                                                                                                                                                                        |                |        |
| ....4                   |    | 07-90270-01      | Chip Resistor                       | 27Ω, ±5%                       | MR111                                                                                                                                                                                                                                                                  | 0805           | 1×4    |
| ....4                   |    | 07-90750-01      | Chip Resistor                       | 75Ω, ±5%                       | MR110                                                                                                                                                                                                                                                                  | 0805           | 1×4    |
| ....4                   |    | 07-90101-01      | Chip Resistor                       | 100Ω, ±5%                      | MR108, MR112, MR113                                                                                                                                                                                                                                                    | 0805           | 3×4    |
| ....4                   |    | 07-90221-01      | Chip Resistor                       | 220Ω, ±5%                      | MR109, MR114, MR118                                                                                                                                                                                                                                                    | 0805           | 3×4    |
| ....4                   |    | 07-90223-01      | Chip Resistor                       | 22KΩ, ±5%                      | MR117                                                                                                                                                                                                                                                                  | 0805           | 1×4    |
| ....4                   |    | 07-90333-01      | Chip Resistor                       | 33KΩ, ±5%                      | MR101                                                                                                                                                                                                                                                                  | 0805           | 1×4    |
| ....4                   |    | 07-90100-05      | Chip Resistor                       | 10Ω, 1/2W, ±5%                 | MR115, MR116                                                                                                                                                                                                                                                           | 2010           | 2×4    |
|                         |    |                  |                                     |                                |                                                                                                                                                                                                                                                                        |                |        |
| <b>CONNECTOR</b>        |    |                  |                                     |                                |                                                                                                                                                                                                                                                                        |                |        |
| ....4                   |    | 13-12506-04      | 6PIN CONNECTOR                      | 2.54, 6PIN, 15mm               | MP101                                                                                                                                                                                                                                                                  | SIP6           | 1×4    |
|                         |    |                  |                                     |                                |                                                                                                                                                                                                                                                                        |                |        |
| <b>PCB</b>              |    |                  |                                     |                                |                                                                                                                                                                                                                                                                        |                |        |
| ....4                   |    | 16-53013-00      | PCB                                 | FR-4, 1.6mm, 36mm×24mm         |                                                                                                                                                                                                                                                                        |                | 1×4    |
| ....5                   |    | 16-53040-00      | PCB                                 | FR-4, 1.6mm, 120mm×180mm       |                                                                                                                                                                                                                                                                        |                | 1/10×4 |
|                         |    |                  |                                     |                                |                                                                                                                                                                                                                                                                        |                |        |
| <b>MECHANICAL PARTS</b> |    |                  |                                     |                                |                                                                                                                                                                                                                                                                        |                |        |
| ...3                    |    | 70-048002-0      | Module Base                         | 6063, T5                       |                                                                                                                                                                                                                                                                        |                | 2      |
| ...3                    |    | 70-048003-0      | Module Cover                        | 6063, T5                       |                                                                                                                                                                                                                                                                        |                | 2      |
| ...3                    |    | 66-048001-0      | Tr. Bracket                         | SECC N4 T=1.0                  |                                                                                                                                                                                                                                                                        |                | 4      |
| ...3                    |    | 61-062206-1      | Self Taping Screws                  | BTF2×6,                        | MODULE HOUSE(8)                                                                                                                                                                                                                                                        |                | 8      |
| ...3                    |    | 61-062108-1      | Self Taping Screws                  | STF2×8,                        | MODULE HOUSE(4)                                                                                                                                                                                                                                                        |                | 4      |
| ...3                    |    | 78-048004-0      | Insulated Cashion                   | 10×15mm                        |                                                                                                                                                                                                                                                                        |                | 8      |
|                         |    |                  |                                     |                                |                                                                                                                                                                                                                                                                        |                |        |
| .1                      |    | P/N: 01-50312-00 | TONE BOARD                          |                                |                                                                                                                                                                                                                                                                        |                |        |
| <b>DIODE</b>            |    |                  |                                     |                                |                                                                                                                                                                                                                                                                        |                |        |
| ..2                     |    | 33-12409-01      | Zener Diode                         | 2.4V, 1/2W                     | 2D19                                                                                                                                                                                                                                                                   | MINIMELF       | 1      |
|                         |    |                  |                                     |                                |                                                                                                                                                                                                                                                                        |                |        |
| <b>TRANSISTOR</b>       |    |                  |                                     |                                |                                                                                                                                                                                                                                                                        |                |        |
| ..2                     |    | 31-00108-01      | J-FET                               | MMBFJ108                       | Q107, Q108, Q109, Q110, Q111, Q112, Q113, Q114, Q115, Q116, Q117, Q118, Q119, Q120, Q121, Q122, Q123, Q124, Q125, Q126, Q127, Q128, Q207, Q208, Q209, Q210, Q211, Q212, Q213, Q214, Q215, Q216, Q217, Q218, Q219, Q220, Q221, Q222, Q223, Q224, Q225, Q226, Q227, Q228 | SOT-23         | 44     |
|                         |    |                  |                                     |                                |                                                                                                                                                                                                                                                                        |                |        |
| <b>ICS</b>              |    |                  |                                     |                                |                                                                                                                                                                                                                                                                        |                |        |
| ..2                     |    | 03-92740-01      | Analog Switch                       | TC9274F-001                    | U112                                                                                                                                                                                                                                                                   | QFP44-P-1414   | 1      |
|                         |    |                  |                                     |                                |                                                                                                                                                                                                                                                                        |                |        |
| <b>CAPACITOR</b>        |    |                  |                                     |                                |                                                                                                                                                                                                                                                                        |                |        |
| ..2                     |    | 26-10451-01      | Ceramic Chip Capacitor              | 100N, 50V, +80%-20%            | 1C29, 2C29, 1C30, 2C30,                                                                                                                                                                                                                                                | 0805           | 4      |
| ..2                     |    | 25-22461-02      | Metallized Polyester Film Capacitor | 220nF, 63V, ±5%                | C111, C211                                                                                                                                                                                                                                                             | Pitch=5mm      | 2      |
| ..2                     |    | 25-82361-00      | Metallized Polyester Film Capacitor | 82nF, 63V, ±5%                 | C109, C209                                                                                                                                                                                                                                                             | Pitch=5mm      | 2      |
| ..2                     |    | 25-33461-01      | Metallized Polyester Film Capacitor | 330nF, 63V, ±5%                | C113, C213                                                                                                                                                                                                                                                             | Pitch=5mm      | 2      |
| ..2                     |    | 25-10561-02      | Metallized Polyester Film Capacitor | 1uF, 63V, ±5%                  | C112, C212                                                                                                                                                                                                                                                             | Pitch=5mm      | 2      |
|                         |    |                  |                                     |                                |                                                                                                                                                                                                                                                                        |                |        |

| L          | CP               | P/N         | Description                         | Part Type                | Designator                                                                                                                                                                                                                                                              | Footprint    | Qty  |
|------------|------------------|-------------|-------------------------------------|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|------|
| RESISTOR   |                  |             |                                     |                          |                                                                                                                                                                                                                                                                         |              |      |
| ..2        |                  | 07-91009-01 | Chip Resistor                       | 10Ω, ±1%                 | 1R51, 1R52                                                                                                                                                                                                                                                              | 0805         | 2    |
| ..2        |                  | 07-91509-01 | Chip Resistor                       | 15Ω, ±1%                 | 2R106, 1R106                                                                                                                                                                                                                                                            | 0805         | 2    |
| ..2        |                  | 07-94879-01 | Chip Resistor                       | 48.7Ω, ±1%               | R156, R256                                                                                                                                                                                                                                                              | 0805         | 2    |
| ..2        |                  | 07-95369-01 | Chip Resistor                       | 53.6Ω, ±1%               | R168, R268                                                                                                                                                                                                                                                              | 0805         | 2    |
| ..2        |                  | 07-96819-01 | Chip Resistor                       | 68.1Ω, ±1%               | R155, R255                                                                                                                                                                                                                                                              | 0805         | 2    |
| ..2        |                  | 07-91000-01 | Chip Resistor                       | 100Ω, ±1%                | R167, R267                                                                                                                                                                                                                                                              | 0805         | 2    |
| ..2        |                  | 07-91210-01 | Chip Resistor                       | 121Ω, ±1%                | R154, R254, R157, R257                                                                                                                                                                                                                                                  | 0805         | 4    |
| ..2        |                  | 07-91500-01 | Chip Resistor                       | 150Ω, ±1%                | R166, R266                                                                                                                                                                                                                                                              | 0805         | 2    |
| ..2        |                  | 07-91600-01 | Chip Resistor                       | 160Ω, ±1%                | R147, R247                                                                                                                                                                                                                                                              | 0805         | 2    |
| ..2        |                  | 07-92490-01 | Chip Resistor                       | 249Ω, ±1%                | R165, R265, R153, R253                                                                                                                                                                                                                                                  | 0805         | 4    |
| ..2        |                  | 07-92740-01 | Chip Resistor                       | 274Ω, ±1%                | R148, R248                                                                                                                                                                                                                                                              | 0805         | 2    |
| ..2        |                  | 07-92870-01 | Chip Resistor                       | 287Ω, ±1%                | R169, R269,                                                                                                                                                                                                                                                             | 0805         | 2    |
| ..2        |                  | 07-93090-01 | Chip Resistor                       | 309Ω, ±1%                | R146, R246                                                                                                                                                                                                                                                              | 0805         | 2    |
| ..2        |                  | 07-93160-01 | Chip Resistor                       | 316Ω, ±1%                | R159, R259                                                                                                                                                                                                                                                              | 0805         | 2    |
| ..2        |                  | 07-94020-01 | Chip Resistor                       | 402Ω, ±1%                | R149, R249                                                                                                                                                                                                                                                              | 0805         | 2    |
| ..2        |                  | 07-94320-01 | Chip Resistor                       | 432Ω, ±1%                | R160, R260                                                                                                                                                                                                                                                              | 0805         | 2    |
| ..2        |                  | 07-94870-01 | Chip Resistor                       | 487Ω, ±1%                | R164, R264                                                                                                                                                                                                                                                              | 0805         | 2    |
| ..2        |                  | 07-96810-01 | Chip Resistor                       | 681Ω, ±1%                | R161, R261                                                                                                                                                                                                                                                              | 0805         | 2    |
| ..2        |                  | 07-96980-01 | Chip Resistor                       | 698Ω, ±1%                | R152, R252                                                                                                                                                                                                                                                              | 0805         | 2    |
| ..2        |                  | 07-98450-01 | Chip Resistor                       | 845Ω, ±1%                | R163, R263                                                                                                                                                                                                                                                              | 0805         | 2    |
| ..2        |                  | 07-98660-01 | Chip Resistor                       | 866Ω, ±1%                | R162, R262, R258, R158                                                                                                                                                                                                                                                  | 0805         | 4    |
| ..2        |                  | 07-98870-01 | Chip Resistor                       | 887Ω, ±1%                | R150, R250                                                                                                                                                                                                                                                              | 0805         | 2    |
| ..2        |                  | 07-91581-01 | Chip Resistor                       | 1.58K, ±1%               | R151, R251                                                                                                                                                                                                                                                              | 0805         | 2    |
| ..2        |                  | 07-91002-01 | Chip Resistor                       | 10KΩ, ±1%                | 2R46, 2R47, 2R48, 2R49, 2R50, 2R51, 2R52, 2R53, 2R54, 2R55, 2R56, 2R57, 2R58, 2R59, 2R60, 2R61, 2R62, 2R63, 2R64, 2R65, 2R66, 2R67                                                                                                                                      | 0805         | 22   |
| ..2        |                  | 07-92002-01 | Chip Resistor                       | 20KΩ, ±1%                | 1R107, 2R107,                                                                                                                                                                                                                                                           | 0805         | 2    |
| ..2        |                  | 07-90106-01 | Chip Resistor                       | 10MΩ, ±5%                | 1R24, 1R25, 1R26, 1R27, 1R28, 1R29, 1R30, 1R31, 1R32, 1R33, 1R34, 1R35, 1R36, 1R37, 1R38, 1R39, 1R40, 1R41, 1R42, 1R43, 1R44, 1R45, 1R46, 2R24, 2R25, 2R26, 2R27, 2R28, 2R29, 2R30, 2R31, 2R32, 2R33, 2R34, 2R35, 2R36, 2R37, 2R68, 2R69, 2R70, 2R71, 2R72, 2R73, 2R74, | 0805         | 44   |
| CONNECTOR  |                  |             |                                     |                          |                                                                                                                                                                                                                                                                         |              |      |
| ..2        |                  | 13-12504-08 | Connector                           | 4PIN                     | J104T, J204T, J105T, J205T                                                                                                                                                                                                                                              | S=2.5mm      | 4    |
| PCB        |                  |             |                                     |                          |                                                                                                                                                                                                                                                                         |              |      |
| ..2        |                  | 16-53012-00 | TON BOARD                           | FR-4, 1.6mm, 92mm×55mm   |                                                                                                                                                                                                                                                                         |              | 1    |
| ...3       |                  | 16-53040-00 | PCB                                 | FR-4, 1.6mm, 120mm×180mm |                                                                                                                                                                                                                                                                         |              | 1/10 |
| .1         | P/N: 01-50311-00 |             |                                     |                          |                                                                                                                                                                                                                                                                         |              |      |
| DIODE      |                  |             |                                     |                          |                                                                                                                                                                                                                                                                         |              |      |
| ..2        |                  | 33-44148-11 | Switch Diode SMD                    | LL4148                   | 1D01, 1D02, 1D03, 1D04, 1D05, 1D06, 1D07, 1D08, 1D09, 1D10, 1D11,1D15, 1D16,                                                                                                                                                                                            | MINIMELF     | 13   |
| ..2        |                  | 33-12409-01 | Zener Diode                         | 2.4V, 1/2W               | 2D20                                                                                                                                                                                                                                                                    | MINIMELF     | 1    |
| TRANSISTOR |                  |             |                                     |                          |                                                                                                                                                                                                                                                                         |              |      |
| ..2        |                  | 31-00114-01 | Digital transistor                  | DTA114EKA                | 1Q24                                                                                                                                                                                                                                                                    | SC59         | 1    |
| ..2        |                  | 31-00114-05 | Digital transistor                  | DTC114EKA                | 1Q23                                                                                                                                                                                                                                                                    | SC59         | 1    |
| ..2        |                  | 31-01815-01 | Transistor                          | 2SC1815                  | 1Q01, 1Q02, 1Q03, 1Q04, 1Q05, 1Q06, 1Q07, 1Q08, 1Q09, 1Q10, 1Q11,1Q25,                                                                                                                                                                                                  | SC59         | 12   |
| ..2        |                  | 31-03326-01 | Transistor                          | 2SC3326A                 | 1Q26, Q130, Q131                                                                                                                                                                                                                                                        | SC59         | 3    |
| ICS        |                  |             |                                     |                          |                                                                                                                                                                                                                                                                         |              |      |
| ..2        |                  | 03-04094-02 | REGISTER                            | CD4094                   | U108, U113                                                                                                                                                                                                                                                              | DSOP16       | 2    |
| ..2        |                  | 03-02134-00 | Opamp                               | OPA2134UA                | U106, U111                                                                                                                                                                                                                                                              | SO8          | 2    |
| ..2        |                  | 03-92740-01 | Analog Switch                       | TC9274F-001              | U109                                                                                                                                                                                                                                                                    | QFP44-P-1414 | 1    |
| CAPACITOR  |                  |             |                                     |                          |                                                                                                                                                                                                                                                                         |              |      |
| ..2        |                  | 26-10151-01 | Ceramic Chip Capacitor              | 100pF, 50V,±5%           | 1C02, 1C04, 1C06, 1C08, 1C10, 1C12, 1C14, 1C16, 1C18, 1C20, 1C22, 1C53, 1C56, C101, C102, C103, C104, C105, C106, C135, C137, C120, C121, C122, C123, C124, C125,                                                                                                       | 0805         | 27   |
| ..2        |                  | 26-22151-01 | Ceramic Chip Capacitor              | 220pF, 50V,±5%           | C132, 1C58                                                                                                                                                                                                                                                              | 0805         | 2    |
| ..2        |                  | 26-10351-01 | Ceramic Chip Capacitor              | 10nF, 50V,±10%           | 1C01, 1C03, 1C05, 1C07, 1C09, 1C11, 1C13, 1C15, 1C17, 1C19, 1C21, 1C57                                                                                                                                                                                                  | 0805         | 12   |
| ..2        |                  | 26-10451-01 | Ceramic Chip Capacitor              | 100nF, 50V, +80%-20%     | 1C49, 1C50, 1C51, 1C52, C117, C130, C131, C133                                                                                                                                                                                                                          | 0805         | 8    |
| ..2        |                  | 25-56361-00 | Metallized Polyester Film Capacitor | 56nF, 63V, ±5%           | C116                                                                                                                                                                                                                                                                    | Pitch=5mm    | 1    |
| ..2        |                  | 25-10461-07 | Metallized Polyester Film Capacitor | 100nF, 63V, ±5%          | C115                                                                                                                                                                                                                                                                    | Pitch=5mm    | 1    |

| L                     | CP | P/N          | Description                         | Part Type                                                              | Designator                                                                                                                                      | Footprint   | Qty  |
|-----------------------|----|--------------|-------------------------------------|------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------|
| ..2                   |    | 25-22461-02  | Metallized Polyester Film Capacitor | 220nF, 63V, ±5%                                                        | 1C60                                                                                                                                            | Pitch=5mm   | 1    |
|                       |    |              |                                     |                                                                        |                                                                                                                                                 |             |      |
| RESISTOR              |    |              |                                     |                                                                        |                                                                                                                                                 |             |      |
| ..2                   |    | 07-90000-01  | Chip Resistor                       | 0Ω, ±5%                                                                | 1R73                                                                                                                                            | 0805        | 1    |
| ..2                   |    | 07-92000-01  | Chip Resistor                       | 200Ω, ±1%                                                              | 1R61,1R62, R189, R193                                                                                                                           | 0805        | 4    |
| ..2                   |    | 07-92200-01  | Chip Resistor                       | 220Ω, ±1%                                                              | R101, R105, R107, R109, R111, R103                                                                                                              | 0805        | 6    |
| ..2                   |    | 07-90472-01  | Chip Resistor                       | 4K7Ω, ±5%                                                              | 1R01, 1R02, 1R03, 1R04, 1R05, 1R06, 1R07, 1R08, 1R09, 1R10, 1R11, 1R12, 1R13, 1R14, 1R15, 1R16, 1R17, 1R18, 1R19, 1R20, 1R21, 1R22, 1R65, 1R66, | 0805        | 24   |
| ..2                   |    | 07-95101-01  | Chip Resistor                       | 5K1Ω, ±1%                                                              | 1R53, 1R54, 1R58                                                                                                                                | 0805        | 3    |
| ..2                   |    | 07-91002-01  | Chip Resistor                       | 10KΩ, ±1%                                                              | 1R74, 1R57, 1R72                                                                                                                                | 0805        | 3    |
| ..2                   |    | 07-92802-01  | Chip Resistor                       | 28KΩ, ±1%                                                              | R192                                                                                                                                            | 0805        | 1    |
| ..2                   |    | 07-93742-01  | Chip Resistor                       | 37K4Ω, ±1%                                                             | R191                                                                                                                                            | 0805        | 1    |
| ..2                   |    | 07-90104-01  | Chip Resistor                       | 100KΩ, ±5%                                                             | 1R67, R195                                                                                                                                      | 0805        | 2    |
| ..2                   |    | 07-90304-01  | Chip Resistor                       | 300KΩ, ±5%                                                             | R188                                                                                                                                            | 0805        | 1    |
| ..2                   |    | 07-90105-01  | Chip Resistor                       | 1MΩ, ±5%                                                               | R12, R102, R104, R106, R108, R110, R190                                                                                                         | 0805        | 7    |
|                       |    |              |                                     |                                                                        |                                                                                                                                                 |             |      |
| RELAY                 |    |              |                                     |                                                                        |                                                                                                                                                 |             |      |
| ..2                   |    | 12-02202-04  | Relay                               | 24V                                                                    | RL101, RL102, RL103, RL104, RL105, RL106, RL107, RL108, RL109, RL110, RL111, RL112                                                              |             | 12   |
|                       |    |              |                                     |                                                                        |                                                                                                                                                 |             |      |
| Connector             |    |              |                                     |                                                                        |                                                                                                                                                 |             |      |
| ..2                   |    | 13-21210-00  | Connector                           | 10PIN                                                                  | J108L, J208L                                                                                                                                    | S=1.25mm    | 2    |
| ..2                   |    | 17-01001-15  | RCA                                 | HANSONG RCA,WHITE                                                      | LRCA1, LRCA2, LRCA3, LRCA4, LRCA5, LRCA6, LRCA7, LRCA8, LRCA9, LRCA10                                                                           | RCAM        | 10   |
|                       |    |              |                                     |                                                                        |                                                                                                                                                 |             |      |
| PCB                   |    |              |                                     |                                                                        |                                                                                                                                                 |             |      |
| ..2                   |    | 16-53011-00  | L INPUT PCB                         | FR-4, 1.6mm, 200mm×60mm                                                |                                                                                                                                                 |             | 1    |
| ...3                  |    | 16-53020-00  | PCB                                 | FR-4, 1.6mm, , 220mm×250mm                                             |                                                                                                                                                 |             | 1/2  |
|                       |    |              |                                     |                                                                        |                                                                                                                                                 |             |      |
| MISC&MECHANICAL PARTS |    |              |                                     |                                                                        |                                                                                                                                                 |             |      |
| TRANSFORMER&AC CORD   |    |              |                                     |                                                                        |                                                                                                                                                 |             |      |
| .1                    |    | 24-10412-03  | Monolithic Capacitor                | 0.1u, 100V, ±20%                                                       | From chassis to GND                                                                                                                             | Pitch=7.5mm | 2    |
| .1                    |    | A07-10229-10 | Carbon Film Resistor                | 2.2 Ω , 1/4W, ±5%                                                      |                                                                                                                                                 | Taping      | 2    |
| .1                    |    | 32-28042-00  | Ground tap                          | GND-8                                                                  |                                                                                                                                                 |             | 4    |
|                       |    |              |                                     |                                                                        |                                                                                                                                                 |             |      |
| TRANSFORMER&AC CORD   |    |              |                                     |                                                                        |                                                                                                                                                 |             |      |
| .1                    |    | 18-53231-01  | MAIN TRANSFORMER                    | TORIOD TI-043813 AU ISS 7                                              | ONE φ70mm THE OTHER φ90mm                                                                                                                       |             | 2    |
| .1                    | ▲  | 15-10250-00  | AC CORD                             | T582-C                                                                 |                                                                                                                                                 |             | C:1  |
| .1                    | ▲  | 15-10125-00  | AC CORD                             | T582-AH                                                                |                                                                                                                                                 |             | AH:1 |
| .1                    | ▲  | 15-10250-03  | AC CORD                             | X-CCC                                                                  |                                                                                                                                                 |             | BC:1 |
|                       |    |              |                                     |                                                                        |                                                                                                                                                 |             |      |
| WIRE                  |    |              |                                     |                                                                        |                                                                                                                                                 |             |      |
| .1                    |    | 14-53030-20  | wire                                | 30PIN, 1.0mm, 250mm, same side                                         |                                                                                                                                                 |             | 1    |
| .1                    |    | 14-53010-10  | FFC                                 | 1.25-C-0.1×0.8-45-4.5/4.5/8/8-10, same side                            | FF1, FF2                                                                                                                                        |             | 2    |
| .1                    |    | 14-53010-01  | FFC                                 | 1.25-C-0.1×0.8-50-4.5/4.5/8/8-10, same side                            | FF3, FF4                                                                                                                                        |             | 2    |
| .1                    |    | 14-53004-00  | wire                                | plug XHB 2.5A-4Y,wireUL1569, 24AWG, terminal:LD2.5A-0.6Y-1, length45mm |                                                                                                                                                 |             | 2    |
| .1                    |    | 14-53002-00  | wire                                | plug XHB 2.5A-3Y,XHB 2.5A-2Y, wireUL2547 (2CORE) 20AWG length:80mm     |                                                                                                                                                 |             | 1    |
| .1                    |    | 14-53002-01  | wire                                | plug:XHB 2.5A-3Y, XHB 2.5A-2Y, wireUL2547 (2CORE) 20AWG length:80mm    |                                                                                                                                                 |             | 1    |
| .1                    |    | 14-53002-02  | wire                                | plug:LD3.96A-3Y, FDFD2-187(8), wire:UL 1672 18AWG red length:50mm      |                                                                                                                                                 |             | 1    |
|                       |    |              |                                     |                                                                        |                                                                                                                                                 |             |      |
| METAL PARTS           |    |              |                                     |                                                                        |                                                                                                                                                 |             |      |
| .1                    |    | 67-048001-0  | Top Cover                           | SECC-N4 T=2.0mm silver gray                                            |                                                                                                                                                 |             | 1    |
| ..2                   |    | 81-048001-0  | SECC                                | SECC-N4 370×370×2.0                                                    |                                                                                                                                                 |             | 1    |
| .1                    |    | 67-048002-2  | Chassis                             | SECC-N4 T=2.0mm                                                        |                                                                                                                                                 |             | 1    |
| ..2                   |    | 65-048002-2  | Chassis                             | SECC-N4 T=2.0mm                                                        |                                                                                                                                                 |             | 1    |
| ...3                  |    | 81-048001-0  | SECC                                | SECC-N4 370×370×2.0                                                    |                                                                                                                                                 |             | 1    |
| .1                    |    | 67-048003-1  | Subfascia                           | SECC-N4 T=1.6mm                                                        |                                                                                                                                                 |             | 1    |
| ..2                   |    | 65-048003-1  | Subfascia                           | SECC-N4 T=1.6mm                                                        |                                                                                                                                                 |             | 1    |
| ...3                  |    | 81-046006-0  | SECC                                | SECC-N4 396×1219×1.6                                                   |                                                                                                                                                 |             | 1/8  |
| .1                    |    | S67-048004-1 | Rear Panel(C)                       | SECC-N4 T=1.6mm                                                        |                                                                                                                                                 |             | C:1  |
| .1                    |    | S67-048014-2 | Rear Panel(AH)                      | SECC-N4 T=1.6mm                                                        |                                                                                                                                                 |             | AH:1 |
| .1                    |    | S67-048024-0 | Rear Panel(CCC)                     | SECC-N4 T=1.6mm                                                        |                                                                                                                                                 |             | BC:1 |
| ..2                   |    | S80-048004-1 | Rear Panel                          | SECC-N4 T=1.6mm                                                        |                                                                                                                                                 |             | 1    |
| ...3                  |    | S65-048004-1 | Rear Panel                          | SECC-N4 T=1.6mm                                                        |                                                                                                                                                 |             | 1    |

| L                    | CP | P/N          | Description                | Part Type               | Designator                                                                                 | Footprint | Qty    |
|----------------------|----|--------------|----------------------------|-------------------------|--------------------------------------------------------------------------------------------|-----------|--------|
| ....4                |    | 81-046006-0  | SECC                       | SECC-N4 396×1219×1.6    |                                                                                            |           | 1/8    |
| .1                   |    | 68-048001-1  | HS Fixl Bar                | C45, HRC45,             |                                                                                            |           | 4      |
| .1                   |    | 66-005009-0  | Tr. Clamping               |                         |                                                                                            |           | 16     |
| .1                   |    | 66-018005-0  | Tem. SW Clamper            | 65Mn HRC48-52,          |                                                                                            |           | 2      |
| .1                   |    | 66-001008-0  | Metal Disc                 |                         |                                                                                            |           | 2      |
| .1                   |    | 68-048002-0  | Shielding Box              |                         |                                                                                            |           | 2      |
| .1                   |    | 70-048010-1  | M3 Fascia 1                | 6063, T5                |                                                                                            |           | 1      |
| .1                   |    | S70-048011-0 | M3 Fascia 2                | Kirbsite, painting      |                                                                                            |           | 1      |
| .1                   |    | S70-048012-1 | Input Button               | Kirbsite                |                                                                                            |           | 7      |
| .1                   |    | S70-048013-0 | Power Button               | Kirbsite                |                                                                                            |           | 1      |
| .1                   |    | 71-048010-0  | Vol. Knob Assy             |                         |                                                                                            |           | 1      |
| ..2                  |    | 75-048020-0  | Knob Core                  | ABS, Black              |                                                                                            |           | 1      |
| ..2                  |    | 70-048014-0  | Knob Skin                  |                         |                                                                                            |           | 1      |
| .1                   |    | 92-048001-0  | Spring for Button          | 65Mn,                   |                                                                                            |           | 8      |
| .1                   |    | 70-048001-0  | Heatsink                   | 6063, T5                |                                                                                            |           | 4      |
| .1                   |    | 69-048024-0  | Copper Spacer-Screw        | hexagon H=10mm,Steel,   |                                                                                            |           | 16     |
| .1                   |    | 69-048031-0  | Copper Spacer-Screw        | hexagon H=70mm,H62      |                                                                                            |           | 4      |
| .1                   |    | 69-048013-0  | Copper Spacer              | hexagon H=59.6mm        |                                                                                            |           | 2      |
| .1                   |    | 69-048032-0  | Copper Spacer              | hexagon, H=36mm         |                                                                                            |           | 2      |
| .1                   |    | 69-048010-1  | Bus Bar A                  | T2Y2, 0.1µm gold plated |                                                                                            |           | 4      |
| .1                   |    | 69-048011-1  | Bus Bar B                  | T2Y2, 0.1µm gold plated |                                                                                            |           | 4      |
| .1                   |    | 30-60480-00  | RCA Shorting Plug          |                         |                                                                                            |           | 2      |
| <b>PLASTIC PARTS</b> |    |              |                            |                         |                                                                                            |           |        |
| .1                   |    | 76-048010-0  | Window lens                | PMMA blue               |                                                                                            |           | 1      |
| .1                   |    | 76-008001-0  | LED Lens                   |                         |                                                                                            |           | 1      |
| .1                   |    | 85-048001-0  | PCB Spacer                 | LCI-11                  | tone control board                                                                         |           | 2      |
| .1                   |    | 83-048010-0  | Foot Assy                  | Black                   |                                                                                            |           | 4      |
| .1                   |    | 17-03001-03  | Hs New Binding Post, Red   |                         |                                                                                            |           | 4      |
| .1                   |    | 17-03001-04  | Hs New Binding Post, White |                         |                                                                                            |           | 4      |
| .1                   |    | 77-048001-0  | Plug Red                   | Just for C version      |                                                                                            |           | C BC:4 |
| .1                   |    | 77-048002-0  | Plug White                 | Just for C version      |                                                                                            |           | C:4    |
| .1                   |    | 75-048022-0  | BUS BAR WASHER             | blue PC                 |                                                                                            |           | 4      |
| .1                   |    | 85-048002-0  | Moveable Bushing           | KG-010N, 43.5mm         | Transformer screen house                                                                   |           | 2      |
| ..2                  |    | 85-000002-0  | Moveable Bushing           | KG-010N, 260mm          | Transformer screen house                                                                   |           | 1/3    |
| .1                   |    | 85-048003-0  | Moveable Bushing           | KG-010N, 18mm           | Transformer screen house                                                                   |           | 2      |
| ..2                  |    | 85-000002-0  | Moveable Bushing           | KG-010N, 260mm          |                                                                                            |           | 1/7    |
| .1                   |    | 76-048012-0  | PC COVER                   | PC T=0.30 Clear         | Standby Board(TOP)                                                                         |           | 1      |
| <b>FASTENERS</b>     |    |              |                            |                         |                                                                                            |           |        |
| .1                   |    | 61-023106-0  | Self Taping Screws         | STB3×6                  | Back board(2)                                                                              |           | 2      |
| .1                   |    | 61-023206-0  | Self Taping Screws         | BTB3×6                  | critesistor(2), front bracket(4), Back board(4)                                            |           | 10     |
| .1                   |    | 61-023208-0  | Self Taping Screws         | BTB3×8                  | Connect board(1), XLR(4),Back board AC INLET(2), windows(3),FPP board(8), Encoder board(2) |           | 20     |
| .1                   |    | 61-023212-0  | Self Taping Screws         | BTB3×12,                | breaker presser(2)                                                                         |           | 2      |
| .1                   |    | 61-223506-1  | Hex Screws w/Tooth washer  | M3×6,                   | power amp board(8), PSU board(8), spk board(8)                                             |           | 24     |
| .1                   |    | 61-373506-0  | Machine Screws             | M3×6                    | PSU board PCB(6), standby board(4),preamp board(2), L input board(2)                       |           | 14     |
| .1                   |    | 61-023506-1  | Machine Screws             | MB3×6,                  | Power amp board(16)                                                                        |           | 16     |
| .1                   |    | 61-024108-0  | Self Taping Screws         | STB4×8                  | foot(4)                                                                                    |           | 4      |
| .1                   |    | 61-023508-0  | Machine Screws             | MB3×8,                  | psu board PCB(2),preamp boardPCB(2)                                                        |           | 4      |
| .1                   |    | 61-224508-1  | Hex Screws                 | GB/T70.1, 4×8           | front pannel1(8)                                                                           |           | 8      |
| .1                   |    | 61-224512-1  | Hex Screws                 | GB/T70.1, 4×12          | heatsink(28), steel bar for fix(16), front pannel2(7)                                      |           | 51     |
| .1                   |    | 61-226510-0  | Hex Screws                 | GB/T70.1, 6×10,         | screen house(8)                                                                            |           | 8      |
| .1                   |    | 63-020616-0  | Spring Washers             | GB93φ6                  | screen house(8)                                                                            |           | 8      |
| .1                   |    | 61-223514-0  | Hex Screws                 | GB/T70.1, 3×14          | transistor(16)                                                                             |           | 16     |
| .1                   |    | 64-208070-0  | Bolts                      | GB/T70.1, M8×70,        | TRANSFORMER(2)                                                                             |           | 2      |
| .1                   |    | 62-010802-0  | Nuts                       | GB6170, M8              | TRANSFORMER(2)                                                                             |           | 2      |
| .1                   |    | 63-020820-1  | Spring Washers             | GB93φ8                  | TRANSFORMER(2)                                                                             |           | 2      |
| .1                   |    | 63-010816-0  | Washers                    | GB97-87 φ8              | TRANSFORMER(2)                                                                             |           | 2      |
| <b>ACCESSORY</b>     |    |              |                            |                         |                                                                                            |           |        |
| .1                   |    | 78-005005-0  | Insulated Cashion          | SFAT686                 |                                                                                            |           | 16     |
| .1                   |    | 86-018002-1  | Expanded Rubber            | 110×25×0.5mm            |                                                                                            |           | 2      |
| .1                   |    | 86-010002-0  | Nonwavens                  | 25×50×0.5mm             | FFC                                                                                        |           | 3      |
| .1                   |    | 87-048002-0  | Button pad                 | NWC White               | KEYS AT FRONT PANNEL                                                                       |           | 7      |
| .1                   |    | 87-048003-0  | Power pad                  | NWC White               | KEYS AT FRONT PANNEL                                                                       |           | 1      |
| .1                   |    | 86-010004-0  | Rubber Pad                 | 10×25×3mm               |                                                                                            |           | 3      |
| .1                   |    | 86-046001-0  | LED Lens Gum               | 3M, Φ2.3×8              | LED AT FRONT PANNEL                                                                        |           | 1      |
| .1                   |    | 86-046002-0  | Padding                    | FR-4, 20×4×1mm          | FRONT PANNEL1(2)                                                                           |           | 2      |
| .1                   |    | 89-046003-0  | Foot Polyfoam              | Φ55, EPS White          |                                                                                            |           | 2      |
| <b>PACKING</b>       |    |              |                            |                         |                                                                                            |           |        |

